

**CHANGE**

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

6430.2 CHG 30

4/21/89

SUBJ: MINUTES OF DOD/FAA JOINT RADAR PLANNING GROUP (JRPG)

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1. PURPOSE. This change transmits attachment 72 to agency Order 6430.2. This attachment is the minutes of JRPG meeting number 72, conducted November 14-18, 1988.
2. FILING INSTRUCTIONS. File this attachment immediately following attachment 72 of this order.



Edward M. Kelly  
Deputy Director, Systems Maintenance Service

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Distribution: A-W (SM)-3; A-X (AF/AT)-2; A-FAF-3 (LTD);  
A-FAT-1 (LTD)

Initiated By: ASM-103



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## 1. ADMINISTRATIVE ITEMS

a. The formal meeting of the JRPG was conducted in Oklahoma City, OK, during the week of 14 Nov 88. The Federal Aviation Administration hosted the meeting through the services of the FAA Depot.

b. The list of attendees at JRPG #72 is at Attachment 1.

c. A current DOD/FAA address list is at Attachment 2.

d. An updated list of FAA Regional JRPG Coordinators is at Attachment 3.

e. Logistics Subgroup Meeting #50 was conducted 16 Nov 88. Minutes of this meeting are at Attachment 4. The new DOD Logistics Subgroup cochairman is Jack Uchman (SM-ALC/MMAMA).

f. Network Subgroup Meetings #4, #5, and #6 were conducted 14 Jan 88, 3 Feb 88, and 24 Feb 88, respectively. Minutes of these meetings are at Attachments 5, 6, and 7. The new DOD Network Subgroup chairman is Maj. Nobile (IAF/DOY).

g. The dates for next year's (1989) JRPG meetings are:

In-House JRPG	3-5 Oct 89
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*Formal JRPG	14-16 Nov 89
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\*The JRPG formal meeting for 1989 will be hosted by the DOD.

The following items document discussion during JRPG meeting #72. Items preceded by references were items discussed in previous JRPG meetings. The first two digits in each reference indicate the meeting number, and the alphanumeric after the hyphen indicate the paragraph in those particular JRPG minutes. Those items without reference are new items discussed by the JRPG. Several action items have been closed, yet some minor actions remain to be completed. OPR's assigned to these items are as indicated and are responsible for ensuring the remaining actions are completed.

## 2. JRPG GENERAL

a. Item 71-2.a, 70-2.a, 69-2.a, 68-2.b, 67-2.c, 66-3.g, 65-3.1, 64-2.g, 63-4.e: Update/Revision of JRPG Ground Rules. The revision of the JRPG organization and concept document is at Attachment 8. Review of the JRPG policy and procedures document will be completed this year. It will then be published and included with JRPG minutes #73.

OPR: FAA/ASM-103

Open

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b. Item 71-2.b: Classification of Joint Use Site Outages. PACAF previously required a section for Hawaii in the Joint Atmospheric Connectivity Security Classification Guide due to differences with NORAD on the classification of radar outages. PACAF modified its position to align with NORAD. This is reflected in the current guide dated 1 Feb 88.

OPR: PACAF/DOQ

Closed

c. Item 71-2.c, 70-2.b, 69-2.c(1): Coordination.

(1) All FAA and USAF personnel associated with the joint use program must understand that the site requirements are not controlled by the FAA nor the USAF as separate entities. Both the FAA and USAF have the responsibility to formally submit (to their respective counterpart) any intent to change/modify/alter joint use site configurations/operating procedures, etc. Both USAF and FAA shall have the opportunity to review and provide input to these changes.

(2) FAA/ASE-210 has requested the 84 RADES be an evaluator on all NCP's related to DOD radar issues.

d. Briefings. The following briefings were provided during JRPG #72:

(1) Organizational Changes.

(a) JRPG minutes #71, para 2dlb, indicates that the boundary between the SW AD Sector and the SE AD Sector will shift eastward. After further review and study, IAF decided against shifting the boundary. Sector responsibility will remain as is. (Briefing provided by SMSgt Teubert IAF/DOY.)

(b) Air Force Communications Command's Engineering and Installation Division (EID) reorganized 1 Aug 88. The Engineering and Installation (EI) and the Plans and Requirements (XP) functions were split out from HQ EID to form a new unit - 1845 EEG. Within this new unit, XPPT is the project management OPR, and EIELC is the engineering management OPR for JSS and FARR. (Briefing provided by Mr. Parker, 1845 EEG/EIELC.)

(2) Review of Last Year's JTI's. The USAF presented a review of last year's JTI's. Areas of interest included:

(a) The number of key performance parameters checked during JTI's remain inconsistent between FAA Regions/AD Sectors. FAA Order 6040.6C requires, as a minimum, all key performance parameters be checked during JTI's.

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(b) The number of key performance parameters out of tolerance for GAG radios remains excessive. Attachment 9 summarizes GRT-22, GRR-24, and GRC-171 parameters, which were out of tolerance.

(c) Deficiencies in technical documentation, i.e., drawings, technical orders, field manuals, etc., remain a problem. The Air Defense Sector/LGK will work with each site to establish a technical documentation baseline. In addition, USAF personnel noted that those sites which have identified a specific OPR for technical documentation tend to do better during JTI's than those sites that do not. LAF strongly urges all sites to designate an OPR and establish a sound baseline. (Briefing provided by MSgt Baker, LAF/LGK.)

(3) FPS-117 Radar Service Performance. FAA Alaskan Region presented data on FPS-117 radar service performance for FY-88 which includes radar and TELCO outages as well as power failures. This data is included at Attachment 10 and shows Cape Romanzof, Cape Newenham, and Tatalina have the lowest availability. FAA suggested these sites may require closer scrutiny by the USAF. RADES acknowledged the Alaskan FPS-117 radars would be the subject of an evaluation in the near future. (Briefing provided by Mr. Wagenius FAA/AAL-461.)

OPR: FAA/AAL-461, 84 RADES

Open

(4) PACE. The 84 RADES mission expanded on 1 Oct 87 to include the management of the PACE program and the PACE personnel located at the four CONUS SOCC's. The 84 RADES main objective is to provide a program that will be viable, useful, cost effective, and provide all echelons of management a method of detecting performance deviations so that corrective action can be taken. One of the first steps to achieve this objective is to automate the collection, reduction, and the analysis of random traffic by installing a COMPAQ 386 deskpro microcomputer at the RADES and each SOCC. RADES will use a software package presently used by the FAA called "Transportable Radar Analysis Computer System (TRACS)." In addition, limited use of dedicated PACE flights will continue on an "as needed basis" when random traffic is very limited and/or for indepth investigative requirements. (Briefing provided by Mr. Penna, 84 RADES/DOV.)

(5) Alaska Initiative. JRPG #71, attachment 5, is the proposed/approved new radar systems in Alaska. Due to budget cuts, the Defense Review Board elected to use the Aleutian Islands radars as a tradeoff for the Alaskan OTH-B. The requirement for three radars for the Aleutian Islands remains valid; however, they are currently unfunded. (Briefing provided by Maj. Lum HQ AAC/LGMK.)

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(6) Electronic Counter Measures (ECM). An ECM demonstration took place in the SE AD Sector/Jacksonville ARTCC area of responsibility on 20 Sep 88 to determine ECM effects on ground based radars using the TAC contracted ECM equipped LEAR-35. Results of the demonstration are at Attachment 11. (Briefing provided by Maj. Nobile 1AF/DOY.)

e. NAT-614. NAT-614 was revised, coordinated, and signed on 1 Sep 88. Copies are available from JRPG Cochairmen.

OPR: FAA/ASM-103, TAC/XPPF

Closed

f. M&R/MC Procedures. The JRPG Procedures for Real Property Maintenance & Repair (M&R) and Minor Construction (MC) at JSS Sites, 1 Nov 88 (Revised) are at Attachment 12. This document supersedes JRPG #66, Attachment 7, and JRPG #69, Attachment 11. The procedures establish responsibilities and methods for accomplishing M&R and MC projects to meet Air Force operational or safety requirements contained within joint use site boundaries.

OPR: TAC/DEPR

Closed

### 3. RADAR EVALUATION/INSPECTION/ANALYSIS/CERTIFICATION

a. Item 71-3.a, 70-2.c, 69-2.e, 68-2.a, 67-2.b, 66-3.d, 65.3.d, 64-2.m, 63-4.a(5): Joint Radar Evaluation Procedures. The original Joint Radar Evaluation Procedures document was signed by Aerospace Defense Command (ADC). Because of the transfer of air defense responsibility to TAC the document needs to be revised. ASM-150 has undertaken a task to rewrite OA-6430.1 (the FAA designation for the original document) with assistance from the 84 RADES. Since USAF no longer is a party to joint regulations, the revised OA-6430.1 will be an FAA only document. This document will be coordinated with USAF since they will participate in evaluations and to allow the USAF to reference the document in their directive. ASM-150 anticipates the document will be completed by the end of FY-89.

OPR: FAA/ASM-150, 84 RADES

Open

#### b. Item 71-3.b(1), 70-2.d(1), 69-2.f(1), 68-2.g(2), 67-3.o(3): MIM Checklist

(1) The MIM Performance Checklist was incorporated in the ARSR-3 Maintenance Technical Handbook. The electronic equipment modification (EEM 6340.13A CHG 2) was issued 7 Feb 88.

(2) The 84 RADES will provide ASM-150 a modified MIM Checklist for use at sites without HFR and sites without HFR and Mode 4.

OPR: FAA/ASM-150, 84 RADES

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c. Item 71-3.b(3), 70-2.d(4), 69-2.f(5): Technical Inspection Handbook (6040.6X). Final coordination of the handbook is expected December 1988 with issuance early CY-89. The Air Force request for a maximum time between completion of technical inspection and issuance of the report has been incorporated in the document.

OPR: FAA/ASM-120

Open

d. Item 71-3.c, 70-2.e, 69-2.g: Joint Flight Inspection Manual Revision (6340.X). The goal establishing a separate Flight Inspection Procedures Handbook for FAA technicians has changed. The revised flight inspection procedures document is now planned to be incorporated as a change to the United States Standard Flight Inspection Manual, OA P 8200.1, section 215. The 84 RADES has voiced concerns with the automated procedures for tilt verification/optimization and the ATCRBS power optimization. The 84 RADES will coordinate with AVN-240 to resolve their differences. Change 46 to OA P 8200.1 will be issued mid-1989.

OPR: FAA/ASM-120/ASM-160/AVN-240  
84 RADES

Open

e. Item 71-3.d, 70-2.f, 69-2.h, 68-2.aa, 67-3.bb: Interagency Ground Inspection Manual Revision (6000.6). USAF changes to the manual have been provided and incorporated. The final document is expected April 1989.

OPR: FAA/ASM-120

Open

#### 4. MAJOR PROGRAMS

a. Item 71-4.a, 70-2.h, 69-2.j(1), 68-2.c(1), 67-2.f, 66-3.j, 65-3.t, 64-3.j: FARR Program

(1) APS-320 will:

(a) Initiate an NCP to change relocation of the Gibbsboro FPS-117 to Murphy Dome, AK, vice Kenai, AK.

(b) Initiate an NCP to incorporate JRPG recommended locations into the NAS System Specification to align with Network Plan recommendations.

(c) Coordinate the NCP's in (1) (a) and (1) (b) above with the USAF.

(2) Alternate locations for Bucks Harbor, ME, Gibbsboro, NJ, Malmstrom, MT, and Lakeside, MT, are being evaluated by FAA regions in coordination with appropriate USAF personnel and will be coordinated through the JRPG Network Subgroup cochairmen.

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(3) PACAF will submit a request to HQ USAF to add Mt. Kokee, HI, to the FARR procurement.

OPR: FAA/APS-320, PACAF

Open

b. Item 71-4.b: Key West, FL 3D Radar. The radar specification is currently out on a Request for Information (RFI) to industry. NAVAIR will review industry comments and present them to USCINCLANT for validation of operational requirements. If USCINCLANT accepts the FARR radar in lieu of a new system, then NAVAIR will work with the JPO to exercise an ARSR-4 option. If not, the procurement will continue as a competitive bid. The Navy 3-D Radar Working Group will reconvene to resolve operational and maintenance philosophies and procedures after USCINCLANT makes a decision on the procurement. The USAF will inform NAVAIR of the exact date the Key West height finder radar will cease operations.

OPR: NAVAIR/55522, IAF/DOY

Open

## 5. JOINT USE SITES

### a. Data Tie Sites

(1) Item 71-5.a, 70-2.k: Pico-del-Este. The Navy has withdrawn their request for transfer of ownership of Pico-del-Este radar equipment to FAA. FAA has no objection to this proposal.

OPR: FAA/ASM-103

Closed

(2) Item 71-5.c(3): Canton (Detroit), MI. The Canton data tie was established in October 1988. A full station evaluation is scheduled for April 1989. The LOA between Great Lakes Region and the NE AD Sector is complete.

OPR: FAA/AGL-461.5, NE AD Sector

Closed

### (3) Item 71-5.f(1): Whidbey Island FACSAC

(a) Local agreement dated 1 Mar 88 between FAA/ANM and USN/Whidbey Island provides the FACSAC with as is radar data from Makah, WA, Mica Peak, WA, Fossil, OR, and Ft. Lawton, WA, on a noninterference basis. A requirement still exists for Whidbey Island to receive radar data from Salem, OR, Crescent City, CA, Mill Valley, CA, and Paso Robles, CA, joint use sites as well as from the Wallula, WA, and Seattle FAA sites. Memorandums of Agreement (MOA) for use of this radar data are currently being negotiated.

(b) Local agreement dated 10 Jun 88 between NW AD Sector and Whidbey Island addresses radio support at Makah, WA. The Navy is rectifying the frequency interference problem at Makah, WA.

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(c) The Navy is currently looking at locations other than Makah, WA, to install radio equipment.

OPR: NAVAIR/55522, FAA/AWP-422.31/ANM-464D      Open  
NW AD Sector/LGK/SCX, SW AD Sector/LGK/SCX  
1845 EEG

b. Item 71-5b: Site Configurations. An updated list of joint use site configurations is at Attachment 13.

OPR: TAC/XPPF      Closed

c. Military Only (CONUS)

(1) Item 71-5.c(2), 70-2.m(2), 69-2.o(2), 68-2.z(2), 67-3.gg: FAA Assumption of Maintenance at Military Only Sites.

(a) Ft. Fisher, NC, was commissioned into Washington ARTCC 27 Jul 88. Makah, WA, was placed under FAA maintenance on 1 Jul 88. Efforts are underway to bring data into the Seattle ARTCC at this time. Tentative plans are to commission the Makah to Seattle ARTCC data link on 3 Mar 89. Planning for conversion of Oceana, VA, is proceeding; equipment installation began in September 1988; and FAA commissioning is planned for 15 May 89.

(b) USAF has requested a temporary data tie to the FAA radar site at Binns Hall, VA, during the period that Oceana is off the air for conversion. This will be worked by the FAA Eastern Region and the Southeast Air Defense Sector.

(c) USAF will pay for tract 100LE lease at Makah, WA, through 30 Jun 90. FAA will assume their applicable lease costs on 1 Jul 90.

OPR: FAA/AEA-462/ANM-464D, SE AD Sector      Open  
TAC/DEPR

(2) Item 71-5c(3): Calumet/Port Austin. Operations ceased at both locations on 1 Oct 88. Radio relocation from Calumet/Port Austin to Wurtsmith is complete. The search radar from each site has been shipped to FAA Depot (official transfer is documented in Attachment 4).

OPR: FAA/AAC-482B, 1AF/SCX/LGK      Closed

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(3) Gibbsboro. HQ AFSC/SDT msg 071515Z Oct 88 concurs with TAC's request that the FPS-117 radar located at Gibbsboro be dedicated to full time operational use by the NE AD Sector. As a result of this decision, the Trevoze data tie was terminated 19 Oct 88. However, future testing requirements may require the Trevoze data tie be reestablished. TAC will provide Eastern Region 90 days notice if the data tie is required again.

OPR: NE AD Sector/DOY

Closed

d. Hawaii

(1) Item 71-5.d(1), 70-2.n(1), 69-2.p(3): Guam Range Extension. Delay lines from Angel Peak LRR will be shipped to Mt. Santa Rosa, Guam, after the SSR/DMTI kit is installed. This is presently scheduled for February 1989.

OPR: FAA/AWP-423.8

Open

(2) Item 71-5.d(2), 70-2.n(2), 69-2.p(5): Kokee Beacon Improvements. A power system study was conducted at Mt. Kokee, HI, to identify improvements for reducing beacon data outages to the Honolulu ARTCC. As requested, APS-310 received a copy of the study. An FY-90 budget item has been submitted by AWP-400 for two 175 kw engine generators for Mt. Kokee (Budget Item 5.b(3)).

OPR: FAA/AWP-423.8/APS-310

Open

(3) Pearl Harbor FACSAC.

(a) The Navy is determining if a modification can be made to the FACTS (Fleet Area Control Surveillance Facility Air Control Tracking System) software which will resolve range gate incompatibilities between the Pearl Harbor FACSAC and the Mt. Kokee radar site. If a software modification cannot be developed or it is not cost effective to procure one, the Navy asked if they could receive radar data from the FAA's AN/FYQ-49 at Mt. Kokee or the ARTCC at Diamond Head. Western Pacific Region has no objection, provided all participating agencies develop and implement a joint MOA. This same problem will exist at the Mt. Kaala site once the MIM modification is installed (MIM Modification Project Status, Attachment 14).

(b) The Navy requested permission to use spare communications channels on the Diamond Head to Mt. Kaala microwave link to satisfy Waimanalo Ridge radio data requirements. The Navy requested EID support in making appropriate cross connects at Mt. Kaala and expanding the Mt. Kaala to Ford Island microwave link to full 60 channel capability. An agreement between FAA/EID/NAVELEX San Diego will be required to document support requirements.

OPR: FAA/AWP-423.8, NAVELEX San Diego  
1845 EEG/XPP/EIE

Open

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e. Alaska

(1) Item 71-5.e(1), 70-2.o(3), 69-2.q(6), 68-2.h(9), 67-3.i(9):  
Murphy Dome. FAA Alaskan Region has been advised that the estimate for the radar receiver upgrade will be \$750K and that the funds will be required in FY-89. This estimate was forwarded to the USAF Alaskan Air Command as requested in last year's minutes.

(a) FAA Alaskan Region needs SSR/DMTI modification for the Murphy Dome FPS-93A to make it easier to maintain.

(b) The FPS-93A will be at Murphy Dome at least until 1993 when delivery of the Gibbsboro FPS-117 will occur. The SSR/DMTI modification will provide increased FPS-93A reliability during this period.

(c) The requirement for a CD-2 at Murphy Dome has been deleted.

OPR: FAA/AAL-461/APS-320  
HQ USAF/XOORC, SAF/AQSD

Open

(2) Item 71-5.e(2), 70-2.o(4), 69-2.q(9), 68-2.h(12): FPS-117 Beacon Modification.

(a) Program Management Directive is awaiting signature by Secretary of the Air Force/Acquisitions.

(b) The Interagency Agreement is in final coordination. First article testing will be done at SM-ALC vice Gibbsboro, NJ. Target date for contract award is September 1989. First delivery is March 1991.

OPR: FAA/APS-310, SAF/AQSD

Open

f. Specific Issues

(1) Item 71-5.g(1), 70-2.q(2), 69-2.s(4): Asbestos at Malmstrom, MT. The USAF completed the project to remove asbestos from the Malmstrom, MT, search tower November 1987.

OPR: TAC/DEPR

Closed

(2) Item 71-5.g(2): Patrick, FL HFR Tower. Height finder operations at the Patrick, FL, joint use site ceased 15 Jul 88. Patrick AFB will retain the tower for storage.

OPR: TAC/DEPR

Closed

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(3) Key West, FL FYQ-47. HQ TAC/DRC letter dated 3 Jun 88 stated that in order to support the Caribbean Basin Radar Network (CBRN) program, the FYQ-47 needs to remain on line after the CD-2 is commissioned. This letter also requested FAA Southern Region continue maintaining the FYQ-47. FAA Southern Region letter dated 7 Jul 88 stated the FYQ-47 can remain; however, they have no plans to retain personnel trained on the FYQ-47, they have no means to train new personnel on the equipment, and supply support through FAA logistics will be minimal. Further discussions during the JRPJG meeting revealed it is not clear whether the retention of the FYQ-47 at Key West is a firm requirement endorsed by USCINCLANT. NAVAIR will investigate this and advise accordingly. The FACTS system presently located at Key West is able to accept the CD-2 format. Since it appears neither the Navy, USAF, nor FAA will continue to support the FYQ-47, it is anticipated that the FACTS system will utilize the CD-2 data until the new 3D radar is installed.

OPR: NAVAIR/55522

Open

(4) Item 71-c(1), 70-2m(1), 69-2o(1), 68-2z(1), 67-3ff: North Truro, MA. The old operations facility will be turned over to the National Park Service after the site is declared excess by USAF. Environmental restoration will start in Spring 1989. Once the environmental work is complete the site can be excessed. In addition, USAF is providing a 2,000 sq. ft. storage building.

OPR: TAC/DEPR

Open

## 6. EQUIPMENT

### a. Item 71-6.a, 70-2.r, 69-2.t, 68-2.w(8): CD-2 Schedule.

(1) There is no schedule for commissioning the remaining CD-2C's at this time.

(2) Current status of CD-2C range resolution: A joint FAA/RADES team using test targets at Elwood, NJ, identified a situation where loss of targets was noted and briefed the attendees on the results. Further effort is required to: optimize the system; have LAF/DOY define a scenario they want tested (flown); and fly above scenario with live aircraft to determine if CD-2C performs to LAF/DOY satisfaction.

(3) The USAF stated they will continue using CD-1's at all joint use sites (possible exception is Phoenix) until the range resolution situation is fully analyzed. TAC/XPPF will provide ASM-103 a letter documenting this request.

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(4) Once the range resolution situation is solved then the following procedures for accepting/commissioning CD-2C's will be used:

- (a) A joint evaluation will be conducted by FAA/RADES personnel.
  - (b) A telecon at the conclusion of the joint evaluation with AD Sector and FAA Region will be conducted by the evaluation team summarizing the results of the evaluation.
  - (c) The region will send a letter to the Air Defense Sector documenting their intent to commission CD-2 on a specific date.
  - (d) The Air Defense Sector will forward the request including their recommendation to LAF/DOY.
  - (e) LAF/DOY will coordinate with TAC/DOY and NORAD/NCO and advise the Air Defense Sector accordingly.
  - (f) The Air Defense Sector will inform the region.
  - (g) Copies of all correspondence will be sent to the JRPG Cochairmen.
- (5) USAF TO's received by LAF/LGK 9 Nov 88. LAF/LGK will provide these TO's to FAA/APS-318.

OPR: TAC/XPPF, LAF/DOY/LGK  
FAA/APS-318, 84 RADES

Open

b. Item 71-6.b: Removal of OA-3751 from Joint Use Sites. The USAF stated that the OA-3751 at North Truro, MA, Patrick, FL, Key West, FL, Richmond, FL, Tyndall, FL, San Pedro, CA, and Bucks Harbor, ME, can be removed even if the CD-2C has not been commissioned. ASM-103 memo dated 28 Nov 88, requested the regions remove the OA-3751 control units and update the site drawings.

OPR: LAF/LGK, FAA/ASM-103

Open

c. Item 71-6c: MIG/MIM at Sites without HFR and Mode 4.

(1) LAF/DOY has determined that MIM's located at sites without HFR and Mode 4 provide no operational value. 1845 EEG/EIELC Engineering Report on the Feasibility of Replacing the MIM at some JSS Sites, dated 28 Sep 88, provides five alternatives for replacing the MIM. Subject report was distributed to ASM-103 and applicable USAF agencies for review and comment. LAF/SC is OPR for consolidating comments, determining an appropriate course of action, and advising the JRPG Cochairmen accordingly.

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(2) ASM-150 has been requested to develop a modification to eliminate the constant alarms created by removal of the HFR and Mode 4. A project has been assigned; however, it is currently on hold pending the outcome of para 6c(1).

(3) IAF/DOY has determined that MIG's, located at CD-2 sites, without HFR and Mode 4 provide no operational value. 84 RADES will provide a recommendation on the feasibility of replacing the MIG at sites without HFR and Mode 4.

OPR: FAA/ASM-150, 84 RADES/DO, IAF/SC

Open

d. Item 71-6.d, 70-2.s, 69-2.u, 68-2.w(6): UPA-62 Installation Schedule. IAF has a total requirement for fourteen UPA-62s as follows: one each for Oceana, VA, Jedsburg, SC, Key West, FL, Ft. Lonesome, FL, Cross City, FL, and Tyndall, FL (USAF owned, FAA maintained for HFR support); two for Makah, WA, one for Ft. Fisher, NC, and one for Oceana, VA (FAA owned and maintained); two for Point Arena, CA, and two for Lake Charles, LA (USAF owned and maintained). IAF/LGK will redistribute current assets to satisfy these fourteen requirements. A total of six CM 500/U are required to support the six HFR locations.

In addition, the USAF is obligated to train two FAA technicians at each HFR site (total - 12). IAF/LGK is developing a training package and will forward details to ASM-103. Kit proofing and field testing will take place at Tyndall, FL, vice Paso Robles, CA.

OPR: IAF/LGK

Open

e. Height Finder Radars

(1) Item 71-6.e(1), 70-2.w(2): HFR Cease Operations/Reduced Watch Coverage.

(a) During July and August 1988, the USAF ceased height finder operations at six locations (Patrick, FL, Whitehouse, FL, Richmond, FL, Slidell, LA, Bucks Harbor, ME, and North Truro, MA).

(b) During FY-3Q/89, the USAF will cease height finder operations at Riverhead, NY. Additional height finders are planned to cease operation during FY-90 and FY-91.



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(c) Regions will submit a letter to the AD Sector stating FAA's intent to go to less than 24 hour watch coverage at a particular site (including data tie sites) on a specific date. AD Sectors will forward these requests to IAF/DOY for further processing and validation.

(d) ASM-103 forwarded a letter to TAC/XPPF stating their intent to go to less than 24 hour watch coverage at coastal sites without HFR's. TAC/DOY/XPPF will provide a response to ASM-103 as soon as possible.

OPR: TAC/XPPF/DOY, IAF/DOY, Air Defense Sectors      Open  
FAA Regions, NORAD

(2) Item 71-6.e(2): Arctic Tower HFR Oil Interval Change. IAF forwarded AFTO Form 22 to SM-ALC 8 Nov 88 for approval.

OPR: IAF/LGK, SM-ALC/MMAMA      Open

(3) Item 70-2z(2), 69-2.bb(5): Power Interrupt Modification for HFR. A power interrupt modification is approved for HFR operations at six locations: Oceana, VA, Tyndall, FL, Ft. Lonesome, FL, Jedburg, SC, Key West, FL, and Cross City, FL. FAA Southern Region will provide kits, materials, labor, and supply support.

OPR: FAA/ASO-465      Open

(4) Radome Inspections. An AF Form 1000 and AFTO Form 22 were submitted to SM-ALC to change the interval for performing radome inspections. AFTO Form 22 was approved on 1 Aug 88 and TO publication change was submitted on 3 Aug 88 for input to TO 31-1-69. Specifically the following changes were made: yearly inspection interval vice semiannual; a special inspection to include a bolt and nut torque after severe weather, i.e., high winds, excessive accumulation of snow or ice, to ensure radome integrity; and the torquing of the radome bolts at least once a year.

OPR: IAF/LGK, SM-ALC      Closed

f. Item 71-6.f, 70-2.x, 69-2.bb(3), 68-2.w(9): FAA Remote Maintenance Monitoring (RMM).

(1) The NCP to resolve the FYQ-47 normal ACE curve selection has been approved. ASM-160 plans to release/publish the electronic equipment modification (EEM) January 1989.

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(2) All RCIU's (FA-10050) have been distributed to LRR sites. The majority are installed and capable of operating. The RCIU is presently undergoing a modification that will allow it to provide limited control of the CD-2.

(3) All ARSR-3 limited RMM field installations are complete, except Mt. Kaala, HI. Joint evaluations have been completed at all sites except Ft. Lonesome, FL, Cross City, FL, and Mt. Kaala, HI.

(4) The ARSR-3 full RMM installation schedule is: First system ORD - 6/89 (Joliet, IL); Last system ORD - 6/92. ASM-150 requested RADES's assistance in integrating and optimizing this modification.

(5) FAA regions will assure full RMM installation downtime is fully coordinated with AD Sector personnel and a joint evaluation is conducted.

OPR: FAA/APS-310/ASM-150

Open

g. Radios

(1) GAG Maintenance Schedule. The FAA proposed to continue to maintain USAF owned radio equipment according to technical standards and tolerances of the applicable USAF TO's, but to use PMI intervals IAW FAA maintenance policy outlined in Order 6000.15. After much discussion concerning USAF inability to change PMI intervals to meet FAA preventive maintenance schedules, FAA agreed to perform maintenance according to applicable USAF TO's.

OPR: 1AF/LGK

Closed

(2) Item 70-2.y(4), 69-2.aa(9): Juniper/Hart. A 485 EIG feasibility study identified the FAA VORTAC site at Lakeview, OR, as a good location to improve USAF radio coverage in the Juniper/Hart airspace. Northwest Mountain Region has no objections to the USAF installing UHF radios at Lakeview.

OPR: NW AD Sector

Open

(3) Item 71-6.g(3): US Customs Service Radios at Joint Use Sites. The antenna and radio equipment are being delivered to the sites. The project support agreement (PSA) has been signed. Installation by 1845 EEG, Tinker AFB, OK, has begun.

USCS has signed the MOA and provided a clean copy of the logistics agreement with SM-ALC. The MOA now requires USAF and FAA final signature.

OPR: FAA/ASM-103, TAC/XPPF

Open

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(4) UHF Radios at Joint Use Sites. LAF approved the following changes regarding single channel UHF radios at joint use sites:

(a)	<u>Location</u>	<u>Total # of Radios Required</u>
	Remsen	6
	Nashwauk	6
	Empire	0
	Kalispell	10
	Malmstrom	10
	Watford City	10
	Finley	10
	Mica Peak	8

(b) The requirement to back up AICC/Guard at CONUS joint use sites is deleted.

(c) As a result of the above reductions, radio restoral requirements for less than 24 hour maintenance coverage need to be developed and will be included as an attachment to JRPG #73 minutes.

OPR: LAF/DOY

Open

h. Item 71-6.h: MIM Modification Status. The current MIM modification status is included at Attachment 14.

OPR: FAA/ASM-150

Closed

i. Item 71-6.i(2), 70-2.aa(3): Test Procedures for Mode 4 Digital Sensitivity. CD-2/GPA-124/ATCBI-5 procedures were forwarded to ASM-150. ASM-150 expects all required Mode 4 digital sensitivity handbook changes to be distributed by the last quarter FY-89.

OPR: FAA/ASM-150

Open

j. Item 71-6.j: Beacon Replacement Program. SM-ALC elected not to exercise options for extra TPX-54 beacon systems and advised FAA they no longer expect FAA participation.

OPR: FAA/APS-310

Closed

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k. Item 71-6k: MARK XV. ASM-500 is FAA OPR for ensuring the MARK XV is interoperable/compatible with current and future civil ATC beacon systems. MARK XV requirements were not included in the FARR specification. ESD is OPR for determining the best approach for incorporating MARK XV into the FARR program.

OPR: FAA/APS-320/ASM-500, ESD, TAC/DRC

Open

1. IF Amplifier. ANM reported that the bandwidth of the IF amplifier could not meet FAA published standards and tolerance on the military FPS-20 radar family. ANM identified a source for new IF amplifiers which could be used to replace the existing amplifiers. A total of four units has been ordered by the FAA Depot. Two will be used at Makah, WA, and the remaining two will be tested at North Truro, MA. After a successful six month test, it is planned to acquire additional units; two for Oceana, VA, two for Ft. Fisher, NC, and three for the FAA Depot for support. No action has been taken for the locations at Guam and Murphy Dome, AK, at this time. Those locations would require a different model and coordination with the USAF.

OPR: FAA/APS-310

Open

m. Three Level Weather Modification. RADES and FAA/Central Region will combine efforts toward optimization of the three level weather modification to the ARSR-3.

OPR: FAA/APS-310, 84 RADES

Open

## 7. LOGISTICS

a. Item 71-7.a, 70-2.bb, 69-2.ee: Supply Priorities. Logistics Support Agreement (NAT-516) between FAA Depot and SM-ALC is being processed. It has been signed by FAA headquarters and returned to Air Force Logistics Command for final signature. Paragraph 9a(3) of this agreement incorporates wording to recognize FAA priorities on an equal basis with Air Force priorities. This should eliminate problems experienced in the past.

OPR: FAA/AAC-482B, SM-ALC/MMAMA

Open

### b. Item 71-7.b: Logistics Technicians at Sites without HFR

(1) Logistic technicians have been removed at 11 joint use sites.

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(2) Logistics technicians will be removed from the following joint use sites upon notification of FAA acceptance of logistics/COMSEC responsibilities:

<u>Site</u>	<u>Target Date</u>
North Truro, MA	31 Jan 89
Kalispell, MT	1 Mar 89
Oilton, TX	1 Mar 89
Patrick, FL	31 Mar 89
Whitehouse, FL	31 Mar 89
Richmond, FL	31 Mar 89
Slidell, LA	31 Mar 89
Bucks Harbor, ME	31 Mar 89

(3) TAC/XPPF will submit a letter to ASM-103 stating TAC's intent to remove the logistics technician by a specific date, and request FAA region to accept COMSEC/logistics responsibility.

(4) To facilitate shipment of USAF spare parts to sites without logistics technicians, FAA shipping/mailling addresses will be used. USAF will reimburse FAA for shipping USAF reparable assets under the provisions of NAT-614.

OPR: FAA/ASM-103, TAC/XPPF, LAF/LGS  
FAA/ANE/ASW/ANM/ASO, NE AD Sector  
NW AD Sector, SE AD Sector

Open

## 8. COMMUNICATIONS

### a. 71-2.d(10): Full Communications Service (FCS).

(1) LAF/SC conducted a test at the Tyndall, FL, joint use site with the CD-1 to verify the new CODEX modems will not interfere with FAA data when the Bayshore buffers are removed. Based on this test, FAA agreed to USAF installing FCS equipment at SE AD Sector joint use sites. LAF/SC and SE AD Sector/SCX will coordinate all actions with FAA region and site personnel. Target date for completing all FCS equipment installation in the Southeast Air Defense Sector is March 1989.

(2) LAF/SC will provide the installation details for the remaining sectors to ASM-103 for approval.

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(3) LAF/SC will conduct a test with the CD-2 to verify the new CODEX modems will not interfere with FAA data when the Bayshore buffers are removed. Results of this test will be forwarded to ASM-103 for review.

OPR: FAA/ASM-103/ASO-465  
LAF/SCX/SCO, SE AD Sector

Open

b. Communications-Electronics Facility Records (CEFR). JRPg #68, para. 2rr, states that FAA technicians will annotate changes to two sets of USAF provided CEFR's (now called CSIR - Communication Systems Installation Record) and provide one set to on-site USAF personnel for distribution. At those sites where there are no on-site USAF personnel, FAA technicians will provide one set to their Air Defense Sector/LGKQ.

OPR: All Site Personnel, AD Sector/LGKQ

Closed

c. Project Support Agreement (PSA). FAA requested two copies of each pertinent project support agreement (PSA) with legible/reproducible drawings be distributed to the Regional Office. This request was made because of the necessary review/coordination required on each PSA. The 1845 EEG agreed to this request.

OPR: 1845 EEG

Closed

9. SECURITY Security surveys were conducted at nine joint use sites that were projected to go to less than 24 hour staffing (Oilton, TX, Ft. Fisher, NC, Makah, WA, Bucks Harbor, ME, North Truro, MA, Whitehouse, FL, Patrick, FL, Richmond, FL, and Slidell, LA). The cochairmen are responsible for validating the reports. TAC/DEPR will coordinate with the appropriate regions to determine how the security discrepancies will be corrected. All Oilton actions were completed.

OPR: FAA/ASM-103, TAC/XPPF/DEPR  
FAA/ASW-463/ASO-465/ANM-464D  
FAA/ANE-462

Open

#### 10. OPERATIONS

a. Autonomous Operations. There is a NORAD requirement for weapons directors to deploy to coastal radar sites during increased DEFCONS (real and simulated). At sites with an HFR, deployed weapons directors (DWD) will use the scope and communications located in the operations room. At sites without an HFR, the USAF requested and FAA agreed to allow DWD's to use the maintenance display. LAF/SCX will assure the autonomous operations phone is relocated to the FAA maintenance display area.

OPR: LAF/SCX

Open

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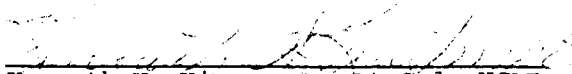
b. Staged Release. JRPG #67, Attachment 5, needs revision. LAF/DOY will provide new procedures to the cochairmen for approval.

OPR: LAF/DOY

Open

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11. These minutes are directive upon the USAF after authentication and directive upon the FAA after signature of the FAA change order.

  
Kenneth H. Kingsmore, Lt Col, USAF  
DOD Cochairman

  
Robert C. Klose  
FAA Cochairman

AUTHENTICATION:

  
MICHAEL E. RYAN, Brig Gen, USAF  
Deputy Chief of Staff, Plans

  
EDWARD M. KELLY  
Deputy Director,  
Systems Maintenance Service



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ATTACHMENTS

1. JRPG #72 Attendees
2. DOD/FAA Current Address List
3. FAA Regional JRPG Coordinators
4. Logistics Subgroup Meeting #50
5. Network Subgroup Meeting #4
6. Network Subgroup Meeting #5
7. Network Subgroup Meeting #6
8. JRPG Organization and Concept Document (Revised)
9. Key Performance Parameters for Radios
10. FPS-117 Radar Service Performance
11. ECM Demonstration Results
12. JRPG Procedures for M&R and MC (Revised)
13. Joint Use Site Configurations
14. MIM Modification Status

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JRPG CONFERENCE  
ATTENDEES

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TELEPHONE</u>
Robert C. Klose FAA JRPG Cochairman	FAA/ASM-103	CM (202)267-8414
Kenneth H. Kingsmore DOD JRPG Cochairman	HQ TAC/XPPF	CM (804)764-4426 AV 574-4426
1. Adams, Gary	FAA/AWP-423.8	CM (213)297-1606
2. Affolter, Ronald T. Capt	NW AD Sector/LGK	CM (206)984-4746 AV 976-4746
3. Altman, Walt	NAVELEX San Diego	CM (619)524-2126 AV 524-2126
4. Baker, D. Brett 1Lt	1AF/SCO	CM (804)764-6235 AV 574-6235
5. Baker, John M. MSgt	1AF/LGK	CM (804)764-6093 AV 574-6093
6. Baker, Robert A. MSgt	1AF/LGSW	CM (804)764-6108 AV 574-6108
7. Bongarts, Monty D. Maj	FAA/ASM-103	CM (202)267-8413
8. Borja, Anthony Capt	475 WEG/DTR	CM (903)283-4108 AV 523-4108
9. Briesmaster, Buddy Capt	HQ TAC/DEPR	CM (804)764-3187 AV 574-3187
10. Chick, Virgil C.	FAA Depot/AAC-482B	CM (405)686-4623
11. Clelland, Lanny	84 RADES/DOV	CM (801)777-2035 AV 458-2035
12. Clemens, William H.	SE AD Sector/LGK	CM (904)283-5481 AV 523-5481
13. Conant, S. Donald	FAA/ASM-150	CM (405)686-2724
14. Constable, Richard A.	NE AD Sector/LGKQ	CM (315)330-7310 AV 587-7310
15. Daudelin, Bob	FAA/ACS-324	CM (202)267-9576
16. DeFranco, Thomas	NAVAIRSYSCOM	CM (202)692-4321 AV 222-4321
17. Dunleavy, Kevin W. Capt	HQ PACAF/DOQ	CM (808)449-8561 AV (315)449-8561
18. Fanyak, James R.	NW AD Sector/SCX	CM (206)984-4738 AV 976-4738

4/21/89

JRPG #72 ATTENDEES

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TELEPHONE</u>
19. Ferrell, Mark E. Maj	HQ USAF/XOORC	CM (202)694-5553
20. Forrest, Ralph D.	FAA/AGL-461.1	CM (312)694-7329
21. Hayes, Philip C. Maj	326 AD/DOG	CM (808)656-1320
22. Ingemi, Anthony R.	FAA/ANE-462	CM (617)273-7213
23. Jacot, David M. Maj	HQ TAC/XPPD	CM (804)764-4426 AV 574-4426
24. Keller, Gary C. Capt	IAF/SCX	CM (804)764-6229 AV 574-6229
25. Kessler, Robert H.	SEIC/APS-320	CM (202)646-2363
26. LaFlam, Lee R.	485 EIG/EPNT	CM (315)330-4354 AV 587-4354
27. Lee, Greg	NAVELEX San Diego	CM (619)524-2139 AV 524-2139
28. Leifeste, Leela D. Capt	24 AD/LGK	CM (315)330-7217 AV 587-7217
29. Lum, Norman C. M. Maj	HQ AAC/LGMK	CM (907)552-4060 AV (317)552-4060
30. Malmberg, Eric D.	FAA/ATR-120	CM (202)267-9184
31. McWhirter, Andrew	SM-ALC/MMAMA	CM (916)643-3972 AV 633-3972
32. Millnik, Frederick G. Capt	SW AD Sector/LGK	CM (714)655-6748 AV 947-6748
33. Misner, Harley L.	FAA/GL QWA ARSR(J-76)	CM (701)828-3389
34. Moell, Warren	FAA/CEC ARSR(J-83)	CM (707)482-3161
35. Morris, Fred	FAA/ASO-465.12	CM (404)763-7110
36. Nobile, Mark Maj	IAF/DOY	CM (804)764-6157 AV 574-6157
37. Paese, Mark	NAVAIRSYSCOM	CM (703)769-7929
38. Parker, J.E.	1845 EEG/EIEL	CM (405)734-9311 AV 884-9465
39. Parks, James B. Capt	11 TGG/LGK	CM (907)552-5105 AV 552-5105

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JRPG # 72 ATTENDEES

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TELEPHONE</u>
40. Penna, Frank V.	84 RADES/DOVT	CM (801)777-3300 AV 458-3300
41. Phinney, Lewis J. Lt. Col.	HQ NORAD/NCOA	CM (719)554-3360 AV 692-3360
42. Phippen, Jack R.	FAA/ANM-464D	CM (206)431-2476
43. Pierce, Malcolm R.	NW AD Sector/LGKQ	CM (206)984-4758 AV 976-4758
44. Pyron, William	FAA/ASM-155	CM (405)686-4271
45. Riccono, August M.	FAA/ASW-463	CM (817)624-5325
46. Rupp, Jay	FAA/ASE-210	CM (202)267-9742
47. Sheldon, Bruce Capt	SE AD Sector/LGK	CM (904)283-5475 AV 523-5475
48. Simmons, Barry	FAA/AWP-422	CM (213)297-1082
49. Sinclair, Irl	FAA/GL QJD ARSR(J-60)	CM (218)885-2267
50. Singleton, Stephen N. Lt. Col.	SE AD Sector/LG	CM (904)283-5456 AV 523-5456
51. Strano, Mario F.	FAA/AEA-462	CM (718)917-1307
52. Taylor, Robert L.	FAA/ASM-155C	CM (405)686-4271
53. Taylor, William P. TSgt	1AF/SCX	CM (804)764-6226 AV 574-6226
54. Teubert, Tom SMSgt	1AF/DOY	CM (804)764-6158 AV 574-6158
55. Thomas, Bobby J. MSgt	HQ TAC/DRCS	CM (804)764-4422 AV 574-4422
56. Thompson, Kenneth W.	FAA/ASM-500	CM (202)267-9734
57. Turner, Jerry L. MSgt	HQ AFCC/AIIC	CM (618)256-4509 AV 576-4509
58. Wagenius, Sevard E.	FAA/AAL-461	CM (907)271-5786
59. Westervelt, Bill	SW AD Sector/LGK	AV 947-6758
60. Weyrauch, Ted	FAA/APS-318W	CM (202)267-8426

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DOD/FAA Current Address List

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DOD/FAA CURRENT ADDRESS LIST  
USAF/NAVY

MAIL

HQ USAF/XOORC/PRPFC  
Washington, D.C. 20300-5054

HQ TAC/XPPF/DEP/DRC/SCX/LGK/DOY  
Langley AFB, VA 23665-5001

1 AF/LGK/SCX/DOY/LGS  
Langley AFB, VA 23665-5009

24 AD/DO/LG  
Griffiss AFB, NY 13441-5000

SE AD SECTOR/SCX/DOC/DOY/LGK  
Tyndall AFB, FL 32403-5000

NE AD SECTOR/SCX/DOC/DOY/LGK  
Griffiss AFB, NY 13441-5000

25 AD/DO/LG  
McChord AFB, WA 98438-6003

NW AD SECTOR/SCX/DOC/DOY/LGK  
McChord AFB, WA 98438-6003

SW AD SECTOR SCX/DOC/DOY/LGK  
March AFB, CA 92518-5000

HQ ESD/SCU  
Hanscom AFB, MA 01731

HQ PACAF/DOQZ/DOCD/SCLM  
Hickam AFB, HI 96853-5001

326 AD/DOG  
Wheeler AFB, HI 96854-5001

154 COMPG/DO/MAI  
Hickam AFB, HI 96853-5000

MESSAGE

HQ USAF WASH DC//XOORC/PRPFC//

HQ TAC LANGLEY AFB VA//XPPF/DEP/DRC/SCX/LGK/  
DOY//

1AF LANGLEY AFB VA//LGK/SCX/DOY/LGS//

24AD GRIFFISS AFB NY//DO/LG//

SE AD SECTOR TYNDALL AFB FL//SCX/DOC/DOY/  
LGK//

NE AD SECTOR GRIFFISS AFB NY//SCX/DOC/DOY/  
LGK//

25AD MCCHORD AFB WA//DO/LG//

NW AD SECTOR MCCHORD AFB WA//SCX/DOC/DOY/  
LGK//

SW AD SECTOR MARCH AFB CA//SCX/DOC/DOY/LGK//

ESD HANSCOM AFB MA//SCU//

HQ PACAF HICKAM AFB HI//DOQZ/DOCD/SCLM//

326AD WHEELER AFB HI//DOG//

154COMPG HICKAM AFB HI //DO/MAI//

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DOD/FAA CURRENT ADDRESS LIST - CONTINUED  
USAF/NAVY

MAIL

HQ AAC/LGMK/DOY  
Elmendorf AFB, AK 99506-5000

11 TCW/DOX/LGK  
Elmendorf AFB, AK 99506-5000

HQ NORAD/NCO/NPR  
Peterson AFB, CO 80914-5001

SIO/SYP  
Peterson AFB, CO 80914-5001

SM-ALC/MMAMA  
McClellan AFB, CA 95652

HQ AFCC/AIIC/ATT  
Scot AFB, IL 62225-6001

1845 EEG/EIEL/XPPT  
Tinker AFB, OK 73145-6343

485 EIG/EIELS/EPNT/EIEUS  
Griffiss AFB, NY 13441

84 RADES/CC/DO/DOVT  
Hill AFB, UT 84056-5000

Commander, Naval Air Systems  
Command  
AIR-55522  
Washington, D.C. 20363-5100

475 WEG/DTR  
Tyndall AFB, FL 32403-5000

MESSAGE

HQ ACC ELMENDORF AFB AK//DOY/LGMK//

11TCG ELMENDORF AFB AK//DOX/LGK//

HQ NORAD PETERSON AFB CO//NCOOG/NPDS//

SIO PETERSON AFB CO //SYP//

DIR MAT MGT MCCLELLAN AFB CA//MMAMA//

HQ AFCC SCOTT AFB IL//AIIC/ATT//

1845EEG TINKER AFB OK//EIW/EPPT/EIELS//

485EIG GRIFFISS AFB NY//EIELS/EPNT/EIEUS//

84RADES HILL AFB UT//CC/DO/DOVT//

COMNAVAIRSYSCOM WASH DC//AIR 55522//

475WEG//DTR//



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DOD/FAA CURRENT ADDRESS LIST - CONTINUED

FAA

MAIL

FAA/ASM-103  
800 Independence Ave., SW  
Washington, D.C. 20591

FAA Technical Center  
ASM-162  
Atlantic City Airport  
Atlantic City, NJ 08405

FAA Aeronautical Center  
AAC-482B/ASM-150  
P.O. Box 25082  
Oklahoma City, OK 73125

FAA/AGL-461.5  
FAA Great Lakes Region  
2300 E. Devon Avenue  
Des Plaines, IL 60018

FAA/ASO-465  
FAA Southern Region  
P.O. Box 20636  
Atlanta, GA 30320

FAA/AEA-462  
FAA Eastern Region  
Federal Bldg.  
JFK Int'l AP  
Jamaica, NY 11430

FAA/ANE-462  
FAA New England Region  
12 New England Exec Park  
Burlington, MA 01803

FAA/AAL-461  
FAA Alaskan Region  
222 W 7th Ave  
Box 14  
Anchorage, AK 99513-7587

MESSAGE

FAA WASH DC//ASM-103//

FAA TECH CENTER ATLANTIC CITY NJ//  
ASM-162//

FAA AERONAUTICAL CENTER OKLAHOMA CITY  
OK//AAC-482B/ASM-150//

FAA GREAT LAKES RGN DES PLAINES IL//  
AGL-461.5//

FAA SOUTHERN RGN ATLANTA GA//ASO-465//

FAA EASTERN RGN NEW YORK CITY NY//  
AEA-462//

FAA NEW ENGLAND RGN BURLINGTON MA//  
ANE-462//

FAA ALASKA RGN ANCHORAGE AK//AAL-461//

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DOD/FAA CURRENT ADDRESS LIST - CONTINUED

FAA

MAIL

FAA/ASM-103  
800 Independence Ave., SW  
Washington, D.C. 20591

FAA Technical Center  
ASM-162  
Atlantic City Airport  
Atlantic City, NJ 08405

FAA Aeronautical Center  
AAC-482B/ASM-150  
P.O. Box 25082  
Oklahoma City, OK 73125

FAA/AGL-461.5  
FAA Great Lakes Region  
2300 E. Devon Avenue  
Des Plaines, IL 60018

FAA/ASO-465  
FAA Southern Region  
P.O. Box 20636  
Atlanta, GA 30320

FAA/AEA-462  
FAA Eastern Region  
Federal Bldg.  
JFK Int'l AP  
Jamaica, NY 11430

FAA/ANE-462  
FAA New England Region  
12 New England Exec Park  
Burlington, MA 01803

FAA/AAL-461  
FAA Alaskan Region  
222 W 7th Ave  
Box 14  
Anchorage, AK 99513-7587

MESSAGE

FAA WASH DC//ASM-103//

FAA TECH CENTER ATLANTIC CITY NJ//  
ASM-162//

FAA AERONAUTICAL CENTER OKLAHOMA CITY  
OK//AAC-482B/ASM-150//

FAA GREAT LAKES RGN DES PLAINES IL//  
AGL-461.5//

FAA SOUTHERN RGN ATLANTA GA//ASO-465//

FAA EASTERN RGN NEW YORK CITY NY//  
AEA-462//

FAA NEW ENGLAND RGN BURLINGTON MA//  
ANE-462//

FAA ALASKA RGN ANCHORAGE AK//AAL-461//

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**FAA Regional JRPG Coordinators**

**Attachment 3**

4/21/89

REGIONAL JRPG COORDINATORS

<u>NAME</u>	<u>REGION</u>	<u>PHONE</u>
Adams, Gary	AWP-423.8	FTS 984-1606 (213)297-1606
Chick, Virgil	AAC-482B	FTS 747-4624 (405)686-4623
Ingemi, Anthony	ANE-462	FTS 836-7213 (617)273-7213
Lorenz, Russ	AGL-461.5	FTS 384-7764 (312)694-7329
Morris, Fred	ASO-465	FTS 246-7109 (404)763-7110
Phippen, Jack	ANM-464D	FTS 446-2476 (206)431-2476
Riccono, Gus	ASW-463	FTS 734-5325 (817)624-5325
Strano, Mario	AEA-462	FTS 667-1307 (718)917-1307
Wagenius, Sevard	AAL-461	FTS 907-271-5786 (907)271-5786

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Logistics Subgroup Meeting #50

Attachment 4

4/21/89

MINUTES OF USAF/FAA  
JOINT RADAR PLANNING GROUP (JRPG) - LOG SUB-GROUP  
MEETING #50

MIKE MONRONEY AERONAUTICAL CENTER  
OKLAHOMA CITY, OKLAHOMA 73125

NOVEMBER 16, 1988

4/21/89

MINUTES OF USAF/FAA  
JOINT RADAR PLANNING GROUP (JRPG) - LOG SUB-GROUP  
MEETING #50

MIKE MONRONEY AERONAUTICAL CENTER  
OKLAHOMA CITY, OKLAHOMA 73125

NOVEMBER 16, 1988

4/21/89

c. Finley, ND	Administrative Furniture & Support Equipment	8C00026 8C00039	10,992.21
d. Malmstrom, MT	Administrative Furniture & Support Equipment	8S00100 8S00107	1,111.90
e. Watford City, ND	" "	8C00274 8C00295	8,257.90
f. Andrews, TX	" "	SW-88-001 SW-88-005	5,380.36
g. Humboldt MT AZ	" "	AWP52-88-01	3,366.79
h. Silver City, NM	" "	SW-88-003	4,445.39
i. El Paso, TX	" "	SW-88-003	1,253.46
j. Empire, MI	" "	8C00172 8C00206	14,438.53
k. Remsen, NY	" "	AEA54-4713	10,904.35
l. Nashwauk, MN	" "	8C00133-145 8C0005-011	5,886.33 2,239.02
m. Cilton, TX	" "	SW-88-002	1,437.80
n. Calumet, MI	AN/FPS-91 Search Radar	9C00045	700,000.00
o. Port Austin, MI	AN/FPS-91 Search Radar	9C00044	700,000.00
p. Fort Fisher, NC	CW-396 Radome	ASo-88-01	102,614.00
	UPA-62C Indicator GP, UPA-62C Test Equipment, UPA-62C & GPA-127 Bench Stock	ASO-88-02	25,082.53
	Radio Tool Kits (GRC-171, GRT-22, KWT-6)	ASO-38-03	61,583.56
	AN/FYQ-47 Test/ Support Equipment, Tool Kit, Admin. Support Equipment	ASO-88-04	19,855.19



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AN/FPS-91/20 Search Radar AN/UPX-14 Test Equipment & Bench Stock	ASO-88-05	\$865,527.80
Support Equipment, Tool Kit Listings, Miscellaneous Items	ASO-88-06	19,014.09
g. Makar, WA Admin. Furniture & Support Equipment	ANM52A4-001	4,521.50
Ground Radio Test Equipment	ANM52A4-002	36,286.87
AN/FPS-91 Search Radar, AN/UPA-62C Indicator (2) CW-396 Radome AB-373 Tower	ANM52A4-003	817,860.00
AN/FPS-91 Radar Test Equipment	ANM52A4-004	81,183.04
AN/FPS-91 and UPA-62C Supply Point	ANM52A4-005	47,701.09
AN/FPS-91 Radar Bench Stock	ANM52A4-006	19,709.10
AN/FPS-91 Radar Tool Kit List	ANM52A4-007	2,861.74
AN/FYQ-47-CD/ AN/GFA-124 Coder, Test/Support Equipment	ANM52A4-008	19,194.11
AN/FYQ-47 CD Supply Point List	ANM52A4-009	61,921.41
AN/FYQ-47 CD Bench Stock List	ANM52A4-010	570.21
AN/FYQ-47 CD Tool Kit List	ANM52A4-011	578.67
AN/FPS-91 Search Radar Components	ANM52A4-012	20,880.00

4/21/89

Vehicle Transfers ANM52A4-012 216,058.00  
(8 ea)

5. Total dollar value of property transferred as a result of this meeting amounted to \$3,943,902.88.

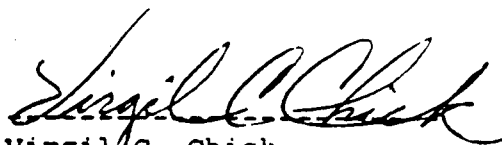
7. The next logistics sub-group will be called by the co-chairman when required.



Andrew McWhirter  
SM-ALC/MMAMA  
USAF Co-Chairman

11-16-88

DATE



Virgil C. Chick  
AAC-482B  
DOT Co-Chairman (FAA)

11-16-88

DATE

4/21/89

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Attachment 72

**Network Subgroup Meeting #4**

**Attachment 5**

4/21/89

January 14, 1988

JRPG NETWORK SUBGROUP MEETING #4  
Washington, D.C.

The radar network subgroup met to determine the status of the review of FAA/DOD coverage requirements to optimize locations for the joint-use ARSR-4 locations. The following were discussed with the actions indicated:

1. Proposal (by USAF) to relocate Oceana, VA, to Cape Charles, VA. This proposed move is unacceptable to the FAA because the Cape Charles site is located almost directly beneath a major airway, site had anomalous propagation problems when used before, site being near the water will have building and equipment corrosion problems, and the prime electrical power is not reliable. ACTION: USAF will review to determine if Oceana will provide for their needs.
2. Proposal to relocate Patrick, FL within area. The USAF survey team recommends that the site be retained and that a higher tower be used. FAA (ASO) had no objections. ACTION CLOSED.
3. Proposal (by FAA) to relocate Ellington (Houston), TX, to Morales, TX. Proposal was made because of the buildup in the Houston area that degrades coverage. USAF supports the move to Morales. ACTION CLOSED.
4. Proposal (by USAF) to relocate Lake Charles, LA, within area. USAF survey team recommends that the site be retained and that a higher tower be used. ACTION CLOSED.
5. Proposal (by FAA) to relocate Sonora, TX, to Rockspring, TX, area. The USAF survey team recommended a site near Vance but had no preference on which site (Vance or Rockspring) to use. FAA (ASW) prefers the Rockspring locations in accordance with the network planning. ACTION CLOSED. ARSR-4 will be located at Rockspring.
6. Proposal (by FAA) to relocate Odessa, TX, to King Mtn., TX. Neither the USAF or FAA wants to locate the radar at Odessa, TX. The King Mtn location will provide better overlapping coverage with Rockspring (or Eagle Peak, Vance and Sonora). The Kings Mtn location will provide coverage in a low level gap along the border in accordance with the FAA (ASW) network planning. ACTION CLOSED. ARSR-4 will be located at King Mountain.

7. Proposal to relocate El Paso, TX, to Eagle Peak (by USAF) or Guadalupe (by FAA), TX. Both the USAF and FAA agree that El Paso should be relocated. USAF survey team proposed Eagle Peak, but the FAA (ASW) prefers the Guadalupe site in accordance with the network planning. ACTION: FAA (ASW) will review to determine if Eagle Peak will provide the coverage needed for FAA. USAF will review to determine if Guadalupe will provide the coverage needed for USAF. Final determination will be made during February.
8. Proposal to relocate Silver City, NM, to Deming (by FAA) or Magdalena Peak (by USAF), NM. USAF survey team proposed Magdalena Peak to improve cross border coverage, but there are other users of this peak which may not allow its use for a radar site. ACTION: FAA (ASW) will review to determine if remaining at Silver City will provide better coverage in lieu of moving to Deming. USAF will also review their requirements for this area. Final determination will be made during February.
9. Proposal to relocate Humbolt Mtn. (Phoenix), AZ, to Mt. Lemon, AZ, (by USAF) or Ajo, AZ, (by FAA). Proposed move is to improve border coverage and southern Arizona coverage. FAA (AWP) proposed the Ajo site to correct long standing Arizona coverage issues and a better tie with the Seligman radar. FAA Region (AWP) indicated that another radar would be needed to provide FAA coverage if the Mt. Lemon site were used. ACTION: FAA (ASW/AWP) will review coverage provided by Ajo and terminal radars in area to determine if Mt. Humbolt should be retained as an FAA only site. USAF will also review their requirements for this area. Final determination will be made during February.
10. Proposal (by USAF) to relocate Mt. Laguna to Black Mtn. South, CA. This proposal is tied in with the use of San Clemente site (see item 11 below) and the Mt. Lemon (see item 9 above) use of the Humbolt radar. FAA (AWP) objects to the San Clemente radar and proposes to remain at Mt. Laguna. ACTION: USAF will review their requirements for this area. Final determination will be made during February.

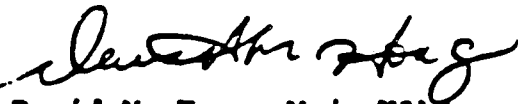
4/21/89

11. Proposal (by USAF) to replace San Pedro, CA, with San Clemente, CA. The FAA (AWP) non-concurs with the San Clemente site. The radar coverage provided from this site would not allow the FAA to eliminate other radars (San Pedro & Mt. Laguna) and would be considered supplemental only. In addition, the accessibility to the San Clemente site is only by the use of special transportation arrangements, the Navy uses the island for a gunnery range, the primary power is unreliable, special overnight quarters would need to be provided, and a special data remoting system would be required. ACTION CLOSED. FAA will continue the San Pedro radar and the USAF will joint-use San Clemente with the Navy with possible data tie from San Pedro ARSR-1E.
12. Proposal (by USAF) to relocate Crescent City, CA, to Rainbow Ridge, CA. This proposed relocation will negate the requirement for Pt. Arena in the ARSR-4 program. FAA (AWP) concurred with the location subject to the evaluation of access road maintenance requirements and the establishment of a suitable sector field office. ACTION: FAA will determine if Rainbow Ridge is adequate from a maintenance point of view.
13. Proposal (by FAA) to relocate Lakeside/Kalispell, Mtn. within area. USAF does not support relocation of this site. The FAA (ANW) needs to relocate the site because it does not provide the necessary air traffic control coverage. The suggested location is the Point Six, MT area. USAF indicates that the existing site will provide for their requirements. ACTION: FAA (ANM) will review and provide recommendation during February.
14. Proposal to relocate Malmstrom (Great Falls), MT, to Porphry Peak, MT, (by FAA) or Judith Peak (old Lewiston radar site), MT, (by USAF). The FAA (ANW) information shows that Judith Peak and the old Lewiston radar site are not the same. The FAA agrees that the Judith Peak area may be a possible alternative to Porphry Peak, but a site survey is needed to confirm this as a suitable location for air traffic control purposes. USAF indicates that the existing site will provide for their requirements. ACTION: FAA (ANM) will review and provide recommendation during February.
15. Proposal (by USAF) to relocate Whitehouse, FL, to Jacksonville GATR, FL. This proposal was made to improve coverage. FAA (ASO) had no objections. ACTION CLOSED.

16. Proposal (by USAF) to relocate Bucks Harbor, ME, within area (GATR site on Miller Mtn). FAA (ANE) is currently evaluating this proposed relocation. Issues being considered are access roads, property ownership, right-of-way, security of unmanned facility and the possible use of existing structures. ACTION: FAA (ANE) will review and provide recommendation during February.
17. Proposal to continue Mt. Santa Rosa, Guam, as a joint use site. The FAA (AWP) has no requirement for primary radar data from this location. Secondary (beacon) only data is needed. ACTION: USAF must review their requirement for maintenance and take action as necessary. ACTION CLOSED.
18. Proposal (by USAF) to not install ARSR-4's at Calumet, MI, and Port Austin, MI. FAA (AGL) will install secondary (beacon) only facilities at these locations to satisfy coverage needs. ACTION CLOSED.
19. Proposal (by FAA) to relocate Gibbsboro, NJ, within area. The FAA plan is to use this site for coverage and delete the Trevoze, PA radar. Gibbsboro, however, is currently located almost directly beneath a major airway. To provide better coverage of this airway a relocation is proposed. ACTION: FAA (AEA) will review and provide recommendation during February.

The next meeting of the Network Subgroup is scheduled for Langley on February 23, 1988. Attendance list is attached.

  
Manuel Gonzalez  
Subgroup FAA Co-Chairman

  
David M. Hoag, Maj. USAF  
Subgroup USAF Co-Chairman

4/21/89

Network Planning Subgroup (JRPG)

Manuel Gonzalez	FAA/AES-300	(202) 267-9762
Major Dave Hoag	IAF/DOYE	(804) 764-6149
		GPA 374-6149
TSgt William Taylor	IAF/ECK	(804) 764-6226
		GP 374-6226
Paul C. Trevino	FAA/ASW-310	PTS 734-5519
Eric D. Malmberg	FAA/ATR-120	(202) 267-9184
MSgt Bobby J. Thomas	HQ TAC/DRCS	(804) 764-3271
		AV 374-3271
Joseph P. Camacho	HQ FAA/AES-320	(202) 267-9715
Roland Haydel	ASW-403	PTS 734-5589
William M. Robertson	ASW-432	PTS 734-5373
Bill Schwarz	HQ EID/EIELS	(405) 734-9312
Randall Trent	HQ EID/EIELS	(405) 734-9595
Major Monty D. Bongarts	FAA/APS-304	(202) 267-8413
Lt. Colonel Kenneth H. Kingsmore	HQTRC/XPPF	827-3321
Bob Klose	FAA/ASH-103	(202) 267-8414
CMStg Ernest Sanchez	84 RADES	(801) 777-7340
Frank V. Penna	84 RADES/DOVT	(801) 777-3300
Lee Riffel	FAA/AES-210	(202) 267-9752
Donald E. Kinney	FARR Program Officer	(202) 646-4835
Bob Laird	FAA/AWP-400	(202) 984-0035
Bob Kessler	ARSR-4 Program Office	(202) 646-2363
	FAA/APS-350	
EMSgt Tenbert	IAF/DOYE	(804) 764-6149/374-6149
Major Ben Thornson	HQ USAF/XOORC	Av 224-5553
		CM (202) 694-5553
Major Jim Minsterl	FAA/APS-5	(202) 267-8711



4/21/89

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ATTACHMENT 72

6430.2 CHG 30  
Attachment 72

Network Subgroup Meeting #5

Attachment 6

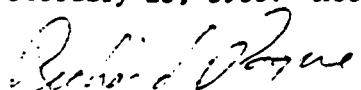
4/21/89

JRPG NETWORK SUBGROUP MEETING #5  
Albuquerque, New Mexico

The radar network subgroup met to determine the status of FAA/DOD coverage requirements along the southwestern CONUS border (Items 7 through 10 of subgroup minutes #4). DOD/FAA planners have concurred on the optimum site locations to meet joint-use requirements. Attached is a chart with line of sight coverage depictions of these locations at 6,000 feet MSL based on the FAA's SEI contractor data base. A planned FAA "Winslow" beacon-only facility location affected by this network will be further reviewed by ASW-500/400 and appropriate requirements and justifications will be forwarded to AWP-500/400 in order to revise the site locations to fulfill FAA air traffic requirements. The selected locations are as follows:

1. Mount Laguna (ARSR-4) - After review of coverage requirements and maintenance concerns, the planning group decided to retain the Mt. Laguna site.
2. Ajo (ARSR-4) - The Ajo site is required to provide coverage in the southern Arizona area in conjunction with Mt. Laguna, Seligman, Humbolt, and Silver City. Significant military traffic and enroute civilian commercial and general aviation traffic traverse this area requiring radar coverage to manage the mix of traffic. Ajo will improve USAF cross-border coverage.
3. Humbolt Mtn. - Retention of the Humbolt Mtn. facility is required to provide both primary and secondary coverage north and east of the Ajo site and interfaced with the Silver City coverage and will be used as an USAF data-tie site. Again, the high traffic activity in this area requires the retention of the Humbolt site. Eventually, terminal coverage in this area may allow decommissioning of this facility after advanced automation equipment is available. An upgrade of the existing radar equipment to solid state will be required.
4. Silver City - The unique coverage volume of the Silver City facility would be very expensive to replace from other facilities, if Silver City was decommissioned. This site is required to provide continuous radar coverage between Deming/Magdalena and the Humbolt/Ajo sites. An upgrade of the existing radar equipment to solid state will be required. This will be used as an USAF data-tie site.
5. Deming/Magdalena (ARSR-4) - A facility in this vicinity is required to supplement the Silver City and Eagle Peak coverages in the Rio Grande Valley due to the intervening mountainous terrain. Installing the ARSR-4 here will save the U. S. Government money over life-cycle of the system.
6. Eagle Peak (ARSR-4) - Relocation of the El Paso radar to the Eagle Peak area is required to meet networking coverage requirements and to interface with the FAA Roswell site. This site significantly improves USAF cross-border coverage.

The next meeting of the Network Subgroup is scheduled for Langley AFB on February 23, 1988. Attendance list is attached.



Richard Pogue  
Subgroup FAA Cochairman



David M. Hoag, Maj. USAF  
Subgroup USAF Cochairman

6430.2 CHG 30  
ATTACHMENT 72



**CASE 2**  
**MT. LAGUNA**  
**AJO**  
**HUMBOLT MTN**  
**SILVER CITY**  
**DEMING**  
**EAGLE PEAK**

4/21/89

<u>Name</u>	<u>Office</u>	<u>FTS</u>
1. Raul C. Trevino	ASW-510	734-5519
2. Richard Pogue	AES-500	8-758-6833
3. Eric D. Malmberg	ATR-120	267-9184
4. Don F. Leech	ZAB-510	476-0510
5. Ralph Jones	ZAB-510.1	476-0511
6. Richard Glover	ASW-465.6	734-5470
7. Bob Wheeler	ASW-511E	734-5518
8. Rick Macha	ABQ AFS	474-2046
9. Bill Robertson	ASW-432	734-5373
10. Joseph O. Pitts	AWP-512	984-1404
11. Robert H. Kessler	APS-350	967-2363
12. Bob Laird	AWP-424.3	984-0035
13. Roland Haydel	ASW-403	734-5589
14. Paul Branch	ZAB-530	476-0533
15. David Pyle	ZAB-530	476-0534
16. Paul Infanti	ZAB-530	476-0535
17. Leroy Powell	ZAB AMTS	476-0430
18. Harley Tucker	ZAB RDPS	476-0450
19. Norman Kusnetz	ZAB ACF	476-0403
20. Roger Lindelow	ZAB AF	476-0400
21. Ed Patterson	ZAB AFS	476-0401
22. Maj. Dave Hoag	IAF/DOYE	Comm. 804-764-6149 GPA 574-6149
23. CMSgt. Ernest Sanchez	84 RADES/DOK	Comm. 801-777-7340 GPA 458-7340
24. Randall Trent	HQEID/EIELS	Comm. 405-734-9595 GPA 884-9595
25. David Roop	ZAB AFS	476-0452

4/21/89

<u>Name</u>	<u>Office</u>	<u>FTS</u>
1. Raul C. Trevino	ASW-510	734-5519
2. Richard Pogue	AES-500	8-758-6833
3. Eric D. Malmberg	ATR-120	267-9184
4. Don F. Leech	ZAB-510	476-0510
5. Ralph Jones	ZAB-510.1	476-0511
6. Richard Glover	ASW-465.6	734-5470
7. Bob Wheeler	ASW-511E	734-5518
8. Rick Macha	ABQ AFS	474-2046
9. Bill Robertson	ASW-432	734-5373
10. Joseph O. Pitts	AWP-512	984-1404
11. Robert H. Kessler	APS-350	967-2363
12. Bob Laird	AWP-424.3	984-0035
13. Roland Haydel	ASW-403	734-5589
14. Paul Branch	ZAB-530	476-0533
15. David Pyle	ZAB-530	476-0534
16. Paul Infanti	ZAB-530	476-0535
17. Leroy Powell	ZAB AMTS	476-0430
18. Harley Tucker	ZAB RDPS	476-0450
19. Norman Kusnetz	ZAB ACF	476-0403
20. Roger Lindelow	ZAB AF	476-0400
21. Ed Patterson	ZAB AFS	476-0401
22. Maj. Dave Hoag	IAF/DOYE	Comm. 804-764-6149 GPA 574-6149
23. CMSgt. Ernest Sanchez	84 RADES/DOK	Comm. 801-777-7340 GPA 458-7340
24. Randall Trent	HQEID/EIELS	Comm. 405-734-9595 GPA 884-9595
25. David Roop	ZAB AFS	476-0452

4/21/89

24 February 1988

JRPG NETWORK SUBGROUP #6  
LANGLEY AFB, VA

The radar network subgroup met to finalize the status of FAA/DOD coverage requirements for the FAA/USAF Radar Replacement (FARR) program of the 1990s. Agreement was reached on most site locations; four locations remain to be finalized:

- (1) Bucks Harbor, ME -- FAA/ANE Region position was unknown.
- (2) Gibbsboro, NJ -- FAA/AEA Region position was unknown.
- (3) Kalispell (Lakeside), MT -- FAA ANM position questioned the joint USAF/EID & FAA/NWM survey conducted in 1986 and suggested the alternate location, Point Six, MT, may not be the best site.
- (4) Malmstrom, MT -- FAA/ANM position questioned the joint USAF/EID -- FAA/ANM Region survey conducted in 1986 and suggested that the alternate locations, Porphyry Peak, MT or Judith Peak (Lewistown, MT) may not offer the best coverage. The FAA/ANM representative suggested another joint FAA/USAF survey be conducted to optimize siting for both FAA and USAF.

A. The following are the sites which were discussed for the FARR program and are listed in order of implementation, with scheduled delivery date, as provided by the Joint Program Office:

1. Mill Valley, CA -- 30 Sep 91. This first site will serve as the test bed.
2. FAA Aero Center, OK -- 2 Dec 91.
3. Makah, WA -- 30 Apr 92.
4. Oceana, VA -- 31 May 92.
5. Lake Charles, VA -- 30 Jun 92.
6. San Clemente, CA -- 31 Jul 92. Scheduled for a new tower; will be a USN procured radar. USAF will share the data; USN/USAF joint-use agreement must be worked. FAA will continue to use San Pedro, CA and USAF will continue to use the radar data.
7. Paso Robles, CA -- 30 Aug 92.

8. Crescent City, CA -- 19 Sep 92. This is a USAF priority for relocation (Rainbow Ridge) since it will allow the Point Arena, CA site to close.
9. Jedburg, SC -- 10 Oct 92.
10. Mt Santa Rosa, Guam -- 30 Oct 92. Will be a joint-use FAA/USAF site.
11. Tyndall, FL -- 19 Nov 92.
12. Salem, OR -- 9 Dec 92.
13. Gibbsboro, NJ -- 30 Dec 92. FAA/AEA Region has concerns about the present location. The USAF has invested considerable resources in these facilities in recent years. OPEN ITEM -- ACTION: FAA/AEA Region. USAF will review to ensure no loss of coverage occurs if FAA suggests a move.
14. Ellington, (Houston) TX -- 19 Jan 93. A move to Morales, TX is required because of a buildup in the Houston, TX area that degrades coverage.
15. Watford City, ND -- 9 Feb 93.
16. Cross City, FL -- 1 Mar 93. A new tower is required since FAA will relocate the existing ARSR-3 radar, tower included.
17. Slidell, LA -- 21 Mar 93.
18. Ft. Fisher, NC -- 11 Apr 93.
19. Bucks Harbor, ME -- 1 May 93. FAA/ANE has concerns about the existing FPS-24 tower since it is five stories high and will pose considerable operations and maintenance expense over the life-cycle of the FARR. OPEN ITEM -- ACTION: FAA/ANE Region.
20. El Paso, TX -- 21 May 93. Relocation of the El Paso radar to the Eagle Peak area is required to meet FAA networking coverage requirements and to interface with the FAA Roswell site. While not required for air defense, this site improves USAF/Customs cross-border coverage.

4/21/89

21. Humboldt Mtn (Phoenix), AZ -- 10 Jun 93. Will be retained as a FAA site and a USAF data-tie site. FARR will be relocated to Ajo, AZ to provide FAA coverage in the southern Arizona area in conjunction with Mt. Laguna, Seligman, Humboldt, and Silver City. While not required for air defense, Ajo will improve USAF/Customs cross-border coverage.

22. Richmond, FL -- 1 Jul 93.

23. Nashwauk, MN -- 21 Jul 93. Requires a new tower since the ARSR-3 will be relocated.

24. Lakeside, MT -- 10 Aug 93. Requires a new tower since the ARSR-3 will be relocated. USAF is satisfied with the existing location but has no objection if FAA relocates the site to the Point Six area. OPEN ITEM -- ACTION: FAA/ANM

25. Mt. Kaala, HI -- 30 Aug 93. Requires a new tower since the ARSR-3 will be relocated.

26. Sonora, TX -- 20 Sep 93. Requires a new tower since the ARSR-3 will be relocated.

27. Whitehouse, FL -- 10 Oct 93. Requires a new tower due to encroachment. Jacksonville, GATR is the preferred location.

28. Riverhead, NY -- 30 Oct 93. Requires a new tower since the ARSR-3 will be relocated.

29. Silver City, NM -- 19 Nov 93. FAA will retain to provide continuous coverage between Deming/Magdalena and the Humboldt/Ajo sites. USAF will use as a data-tie site. The FARR site will be relocated to the Deming/Magdalena area. FAA requires this to supplement the Silver City and Eagle Peak coverages in the Rio Grande Valley due to the intervening mountainous terrain.

30. Empire, MI -- 10 Dec 93. Requires a new tower since the ARSR-3 will be re-located.

31. Finley, ND -- 30 Dec 93. Requires a new tower since the ARSR-3 will be re-located.

32. Utica, NY -- 19 Jan 94.



33. Mica Peak, WA -- 8 Feb 94.

34. Mt. Laguna, CA -- 1 Mar 94. Requires a new tower since the ARSR-3 will be re-located.

35. Malmstrom, MT -- 21 Mar 94. The joint USAF/EID -- FAA/ANM Region survey identified two alternatives, either of which provides better coverage than Malmstrom. FAA/ANM prefers the Porphyry Peak location, southeast of Great Falls, MT since it enhances the enroute coverage of southern Montana. The USAF does not require better coverage but the old Lewistown radar site would significantly improve NW AD Sector radar coverage in the intercept training areas of north central Montana. FAA/ANM Region suggests that another joint survey be conducted to determine if another location in the Porphyry Peak area would provide improved coverage for both FAA and USAF. OPEN ITEM -- ACTION: FAA/ANM

36. Patrick, FL -- 10 Apr 94.

37. Odessa, TX -- 30 Apr 94. Site will be relocated to King Mtn., TX to provide overlapping coverage with Rocksprings and Eagle Peak.

38. Fort Lonesome, FL -- 21 May 94. Requires a new tower since the ARSR-3 will be relocated.

39. North Truro, MA -- 10 Jun 94.

40. Dillon, TX -- 30 Jun 94.

41. The Gibbsboro FPS-117 is scheduled for delivery to Kenai, AK in November 1993.

B. In summary, a prioritized listing of FARR relocations is provided:

1. Crescent City, CA relocate to Rainbow Ridge so Point Arena can close.
2. Whitehouse, FL relocate to Jacksonville GATR site due to encroachment.
3. Bucks Harbor, ME relocate to GATR site on Miller Mtn.
4. Ellington, TX relocate to Morales due to encroachment in Houston area.

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THE FOLLOWING SITES (5-9) MUST BE RELOCATED AS A GROUP TO MAINTAIN  
CONTINUITY OF COVERAGE ALONG THE SOUTHWESTERN US BORDER:

5. Humboldt Mtn (Phoenix), AZ relocate to Ajo, retain Humboldt as a FAA site and a USAF data-tie.

6. Silver City, NM relocate to Deming/Magdalena area, retain Silver City as a FAA site and a USAF data-tie.

7. El Paso, TX relocate to Eagle Peak.

8. Odessa, TX to King Mountain.

9. Sonora, TX to Rocksprings.

THE FOLLOWING (10-12) REQUIRE ACTION BY FAA AS INDICATED:

10. Kalispell, MT. ACTION: FAA/ANM Region

11. Malmstrom, MT. ACTION: FAA/ANM Region

12. Gibbsboro, NJ may be relocated if FAA/AEA desires and USAF agrees.

C. In addition, the USAF will require radar coverage from the following sites:

- |                           |                    |                     |
|---------------------------|--------------------|---------------------|
| 1. Grand Bay, AL          | 2. The Plains, VA  | 3. Dansville, NY    |
| 4. Keno, OR               | 5. Detroit, MI     | 6. San Pedro, CA    |
| 7. Humboldt Mtn, AZ       | 8. Silver City, AZ | 9. San Clemente, CA |
| 10. USN site Key West, FL |                    |                     |

D. A joint-use agreement between USN/USAF must be worked for S. Clemente.

E. A joint-use agreement among the USN, USAF, and FAA must be finalized for use of the USN procured 3-D radar for Key West.

  
GERALD J. MARKEY  
Subgroup FAA Co-Chairman

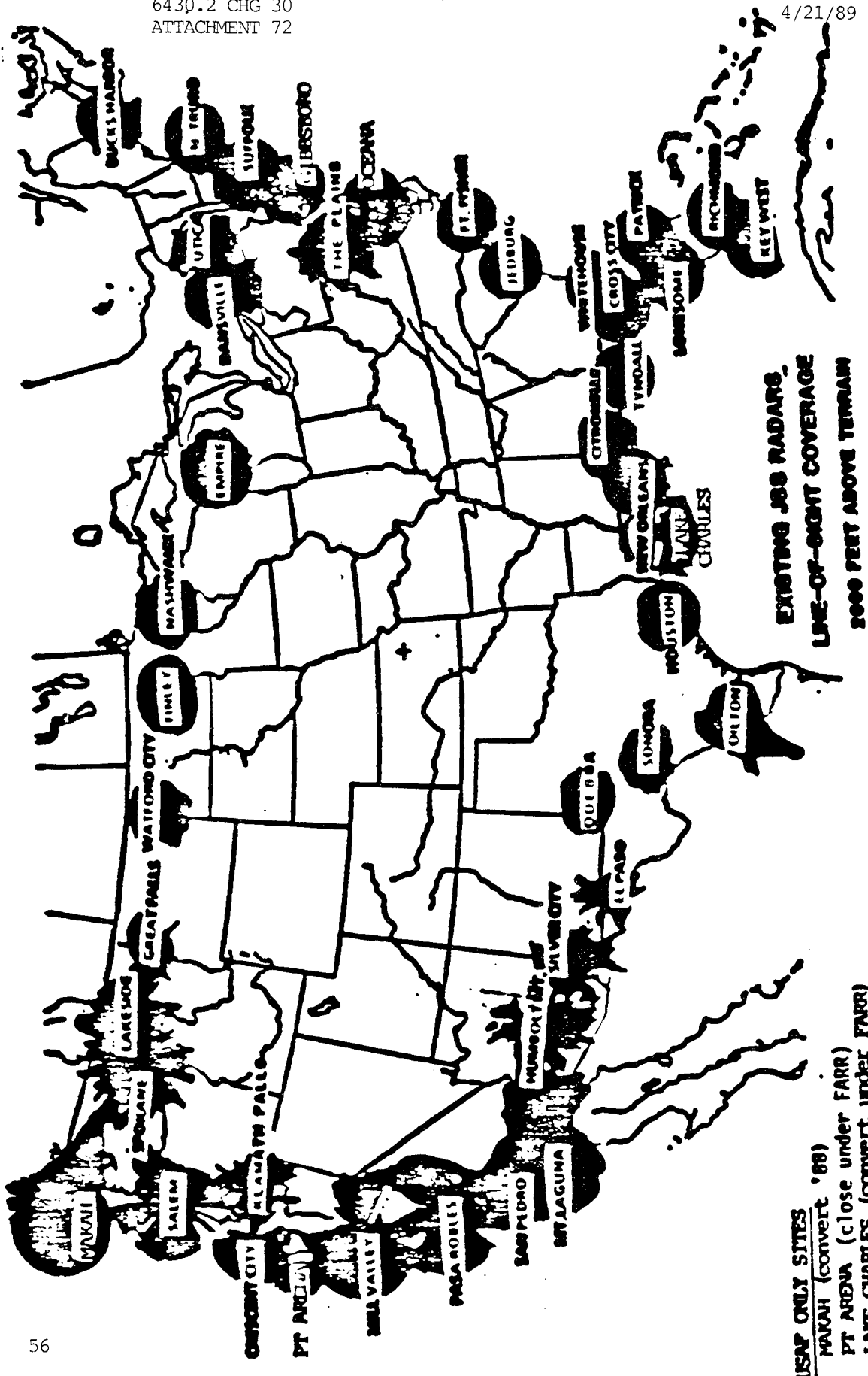
  
DAVID M. HOAG, Lt Col, USAF  
Subgroup USAF Co-Chairman

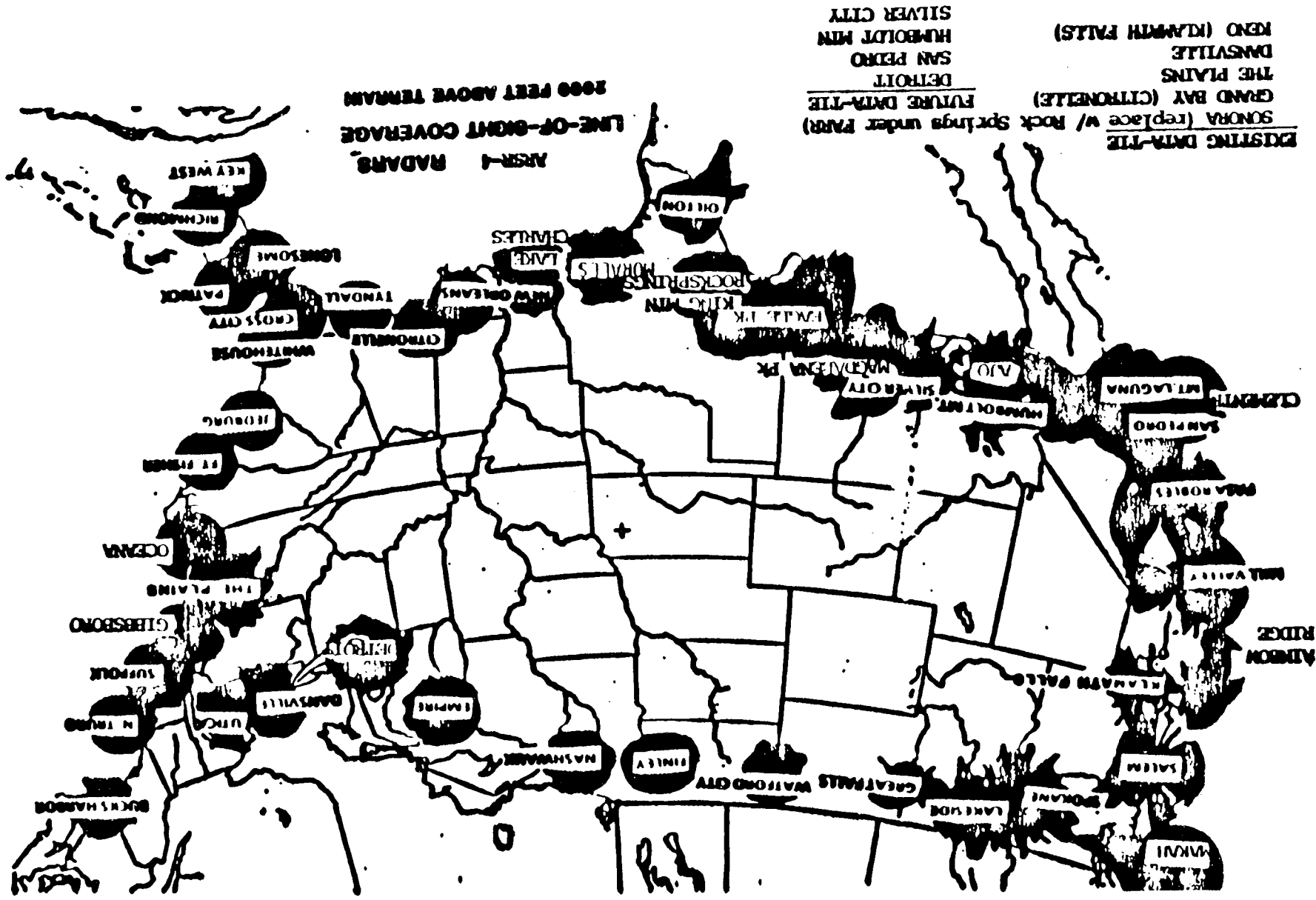
2 Atch: 1) Attendance list  
2) JSS/FARR sites

ATTENDANCE LIST

<u>NAME</u>	<u>ORGANIZATION</u>	<u>PHONE</u>
Maj Dave Hoag	1AF/DOYE	GPA 587-6149 Comm (804) 764-6149
Gerald J. Markey	FAA (AES-500)	202-267-9738
Kenneth W. Thompson	FAA HQ, (AES-500)	202-267-9732
MSgt Bobby J. Thomas	HQ TAC/DRCS	GPA 574-3951 Comm 764-3951
SMSgt Tom Teubert	1AF/DOYE	764-6149
William P. Taylor	1AF/SCX	GPA 574-6226 Comm 804-764-6226
John M. Baker	1AF/LGK	GPA 574-6093 Comm 804-764-6093
Allison Kelley	TAC/DOYD	GPA 574-2417
Robert H. Kessler	FAA/APS-350	202-646-2363
Eric D. Malmberg	FAA HQ/ATR-120	202-267-9184
Dianne M. Lethaby, Capt	HQ NORAD/NCOOG	692-5470
George Johnston	FAA/ANM-46L	206-431-2481
Jay Rupp	NAVIAIR	(202)692-4321
Maj Monty Bongarts	FAA/APS-304	(202)267-8413
Robert C. Klose	FAA/ASM-103	(202)267-8414
Kenneth H. Kingsmore	HQ TAC/XPPF	FTS (804) 827-3321
Lt Col W. K. Stillwell	HQ TAC/XPPD	

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JRPG Organization and Concept Document (Revised)

Attachment 8

6430.2 CHG 30  
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JRPG Organization and Concept Document (Revised)

Attachment 8

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#### PREFACE

In the interest of economy, reduction of federal power consumption, use of public lands and propagation of radar emanations in the atmosphere, while providing for effective accomplishment of the missions of the Department of Transportation (DOT) and the Department of Defense (DOD), formalized planning for the joint-use of long range radar facilities was established.

The United States Air Force (USAF) was designated the DOD executive agent for planning-joint use of DOD/FAA en-route radar facilities. Within the USAF, TAC has the executive agent's responsibilities.

The Federal Aviation Administration (FAA) was designated the DOT executive agent for joint planning. Within the FAA, the Systems Maintenance Service has the executive agent's responsibilities for joint-use planning.

All joint-use planning of long range (en-route) radar facilities will be implemented and coordinated through the Joint Radar Planning Group (JRPg) as established in the Ground Rules for Air Defense Command and Civil Aeronautics Administration Joint Use of Radar Facilities dated 29 Oct 58.

Changes to this document may be submitted at any time, through organizational channels, to one of the following addressees:

Headquarters Tactical Air Command  
TAC/XPP  
Langley AFB, VA 23665

Federal Aviation Administration  
FAA/ASM-103  
800 Independence Ave., SW  
Washington, DC 20591



SCOPE

This document reflects the JRPG concept and organization, as originally established in the Ground Rules and subsequently formally modified through periodic JRPG meetings. A chronology is provided which traces the evolution of the joint-use program. Key players are identified and their responsibilities defined.

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#### EXPLANATION OF TERMS

Joint Radar Planning Group (JRPG): The JRPG is a permanent committee, composed of USAF, FAA, and other representatives whose responsibilities include the authority to commit their respective agencies for planning actions. The purpose of the JRPG is to plan for the joint-use of radar assets and to establish and implement policies concerning the joint-use of DOD and FAA facilities.

Joint-Use: Joint-use involves the sharing of long range (en-route) radar data by both the military and the FAA and includes physical collocation of military/FAA units or data tie arrangements where one agency's facility provides data to the other. Joint-use can be classified according to the duration of the requirement. Those requirements that are permanent are subject to all JRPG policies/procedures/agreements. Those requirements that are temporary are subject to terms agreed to between the applicable military unit/FAA region. A facility will not be considered a permanent joint-use facility until a joint radar evaluation is conducted, and a local operating agreement established.

Radar Evaluation: A radar evaluation is performed to define equipment and/or station capabilities and limitations and to establish an optimum facility configuration. USAF types of evaluations are normally performed by the implementing command and the 84 Radar Evaluation Squadron (RADES). FAA radar evaluations (flight inspections) are performed by FAA Flight Inspection Units. Joint USAF/FAA evaluations are performed on joint-use radar facilities and are conducted by the 84 RADES with participation from appropriate USAF and FAA agencies.

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Figure 1 - Coordination Chain

Figure 2 - Problem Solving Flow

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## Chapter 1

### Joint-Use Chronology

1-1. Background. As early as 1947, both the military and the Civil Aeronautics Administration (CAA) were examining means of effecting savings to the national economy by integrating various components of the overall system. As is readily apparent from the Congressional Aviation Policy Board Report of 1947, the potential economic and operational advantages of integrating the military and civil systems was recognized and advocated at top government levels. A program to develop ground rules for joint-use of long range radar was initiated in 1954 by the CAA in cooperation with headquarters, USAF and Air Defense Command. This action was sanctioned in the "Civil Air Policy" report and approved by the President of the United States on May 26, 1954. On 7 Nov 1956 the USAF/CAA Ground Rules for Joint Use of Radar Facilities were approved by ADC and CAA. This document (rewritten in 1958) became and still remains the foundation of the joint-use program.

#### 1-2. Key Events.

19 Mar 56

From: AF/DCS-O  
To: ADC/CC

"ADC HQ is hereby designated the responsible agency within the Department of the Air Force for developing an orderly program to integrate Air Defense and CAA Air Traffic Control functions." (Superseded by 17 Jan 61 letter)

7 Nov 56

USAF/CAA Ground Rules for Joint Use of Radar Facilities approved by ADC and CAA. Established JRPG.

First JRPG meeting.

1957

Joint-use ground rules approved by CAA and AAC and by CAA and ATC.

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1957

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17 Jan 61

From: AF/ODC-OP  
To: ADC

"2a. ADC is designated as the Air Force Agency to represent the Air Force in negotiating and preparing proposed agreements for joint use of operational air defense facilities.

3a. Establish policies that encourage maximum progress toward integration of Air Defense and Air Traffic Control.

5. This letter supersedes HQ USAF letter, dated 19 Mar 56."

2 Feb 61

From: ADC/DCS-Plans, M/G Agan  
To: HQ USAF

"ADC and the FAA...have since 1956 had an active program for the integration and joint use of Air Traffic Control and air defense facilities. A portion of this program was initiated in the latter part of 1956 as a result of an agreement between ADC and CAA (predecessor of FAA) entitled 'Ground Rules for Air Defense Command and CAA Joint Use of Radar Facilities.'

The implementation and administration of this cooperative program has been under the cognizance of a joint ADC/FAA committee known as the 'Joint Radar Planning Group.'"

3 May 66

From: D.D. Thomas, Deputy Administrator, FAA  
To: Robert H. Charles, DOD Representative to FAA

"...explore...joint use of NAS facilities and air defense facilities, particularly control centers.

...it is proposed...that joint planning action between our agencies be accomplished by designating Executive Agents within our existing organizations. If...arrangement is acceptable, we...designate our Executive Agent as the NAS Special Projects Office..."

11 Jul '66

From: OSD, Robert H. Charles, DOD Representative to FAA  
To: Memo For CSAF

"This memorandum constitutes authority for the Department of the Air Force to act as the DOD Executive Agent for joint planning with the FAA concerning NAS."

From: Robert H. Charles, DOD Representative to FAA  
To: D.D Thomas, Deputy Administrator, FAA

"The Department of the Air Force has been designated as the DOD Executive Agent for NAS planning."

21 Oct 66

From: ADC/CC, Lt Gen H.B. Thatcher  
To: Administrator, FAA, General McKee

"This command has been appointed to act for the Air Force (the Air Force having been designated the DOD executive agent) in joint planning for the possible use of NAS centers."

19 Jun 74

USAF PMD established JSS

8 Jan 75

MOA (NAT-614) signed

301900Z Aug 79

From: HQ USAF/PA  
To: CC's

"Transfer of management responsibilities for atmospheric assets to TAC...will occur on/about 1 Oct 79."

15 Dec 81

MOA (NAT-614) amended

1 Sep 88

NAT-614 Amendment No. 2

4/21/89

## Chapter 2

### JRPG Concepts

2-1. Authority. The JRPG was established under the Ground Rules for Joint Use of Radar Facilities as the vehicle to implement a joint-use program. Joint, refers to an interaction between military air defense organizations and civilian air traffic control agencies. The term, radar, is limited to long range (en-route) radars. Planning concerns all those actions required to ensure a successful integration of air defense/air traffic control long range radars. The work, group, within the JRPG acronym implies that there is a collective body of individuals involved in the joint-use planning of long range (en-route) radars.

2-2. Functions. The JRPG is responsible for:

- a. Planning the joint-use of long range facilities.
- b. Developing policies/procedures/agreements necessary to ensure successful integration.
- c. Coordinating all matters which affect joint-use operations.
- d. Identifying and resolving joint problems.
- e. Documenting all actions.
- f. Recommending mutually acceptable radar locations for the joint-use program.

2-3. Programming & Budgeting. Equipment, personnel, and facilities which are required to support joint-use sites will be programmed and budgeted in accordance with existing USAF/FAA policies and procedures. The JRPG is not responsible for programming and budgeting for these items although they may assist in identifying requirements.

2-4. Directives. FAA and military personnel assigned to a joint-use facility will comply with applicable joint FAA/USAF and host agency directives.



## Chapter 3

## JRPG Organization

3-1. Co-chairmen. The JRPG is co-chaired by a representative from TAX/XPP and a representative from FAA/ASM-100. The TAC co-chairman will be designated by the Deputy Chief of Staff, Plans, Headquarters Tactical Air Command. The FAA co-chairman will be designated by the Director, Systems Maintenance Service, Headquarters Federal Aviation Administration. The co-chairmen will:

- a. Function as the senior spokesman for their respective agencies, with authority to commit their agencies for planning purposes.
- b. Conduct meetings and publish minutes.
- c. Initiate planning documents/agreements when necessary.
- d. Ensure coordination.
- e. Document all actions.
- f. Develop procedures and establish policies.
- g. Establish JRPG subgroups when required.
- h. Resolve problems.

3-2. Subgroups. Subgroups and/or special committees required to resolve special unique problems in the joint-use program will be established at the discretion of the JRPG co-chairmen. Subgroups will be co-chaired by FAA and USAF approved JRPG representatives and consist of members from FAA, USAF, and other agencies as appropriate. Subgroups will meet as required. Formal subgroup minutes of agreements reached and recommended actions to be taken, upon JRPG approval, will become part of the formal minutes of the next JRPG meeting. Four subgroups currently exist:

- a. Logistics Subgroup (LSG). The LSG shall be responsible to the JRPG for the resolution of supply, material, and other logistics problems including equipment/material property transfers between agencies in support of the USAF/FAA joint-use radar program.

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b. Engineering Subgroups (ESG). The ESG shall be responsible to the JRPG for the resolution of engineering problems. Group members will be determined based on the nature of the engineering problem to be discussed.

c. Communications Subgroup (CSG). The CSG shall be responsible to the JRPG for the resolution of communications problems.

d. Radar Network Subgroup (RSG). The RSG shall be responsible to the JRPG for recommending mutually acceptable radar locations for the joint-use program.

3-3. Membership. General membership will be limited to the minimum number of persons necessary to carry out responsibilities of the group in a continuous and orderly manner. The co-chairmen will determine those organizations/commands they deem necessary to perform the functions of the group. The group will normally consist of, but not be limited to, members from HQ FAA, HQ USAF, TAC, AFCC, PACAF, AAC, AFLC and NORAD. It is the responsibility of each member to identify issues which require JRPG attention and to work toward mutual satisfaction through a spirit of cooperation.

3-4. Meetings. Formal JRPG meetings will be convened as required, but at least annually. The purpose of these meetings is to formally discuss and document actions that have transpired since the previous meeting and those that are planned for the future. Responsibility for hosting the JRPG will alternate between FAA and TAC. The host will be responsible for determining the meeting location, and publication of the meeting minutes will be as mutually agreed by the co-chairmen. As a prelude to a formal FAA/USAF JRPG meeting, the FAA and the USAF will hold separate meetings to establish and confirm agency agenda items for the forthcoming formal meeting. These independent FAA and USAF JRPG "in-house" meetings will be jointly scheduled for the same time period. The "in-house" meetings should be scheduled 2-4 weeks prior to the formal USAF/FAA JRPG meeting. The interval of time between the two meetings will permit the coordination of new agenda items between the two agencies.

3-5. Meeting Minutes. Minutes will consist of the status of old (previously submitted) action items, new action items including responsible OPR's and any other correspondence applicable to joint-use operations, i.e., agreements, checklists, subgroup minutes, reports, planning documents, procedures, etc. Minutes will be signed by the JRPG co-chairmen and authenticated at the Deputy Chief of Staff, Plans, Headquarters TAC and the Director, Systems Maintenance Service, Headquarters FAA level. Internal agency coordination will be as determined by the co-chairmen. The authenticated minutes will task OPR's

to action as agreed upon/discussed during the meeting. The minutes will be retained for permanent record as changes to FAA Order 6430.2.

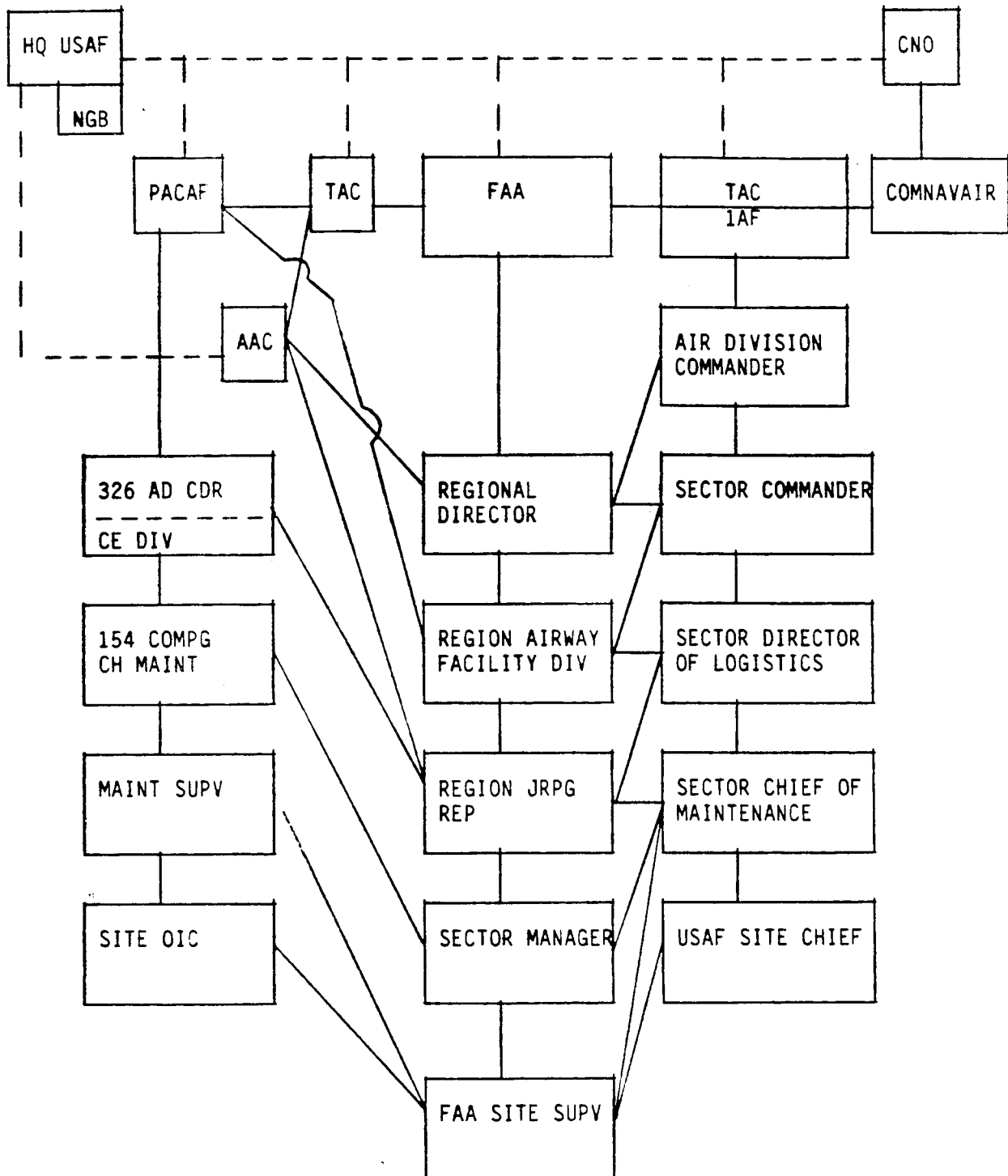
3-6. Chain of Command. The chain of command will be followed for all matters which cannot be resolved locally. Problems not solvable at one level shall be forwarded to the next higher level of authority for resolution. Resolution of problems at the lowest level possible is encouraged. Within FAA, a JRPG coordinator has been identified for each FAA region for the sole purpose of resolving joint-use problems within his region and to coordinate proposed solutions with applicable USAF agencies. A coordination chain/problem solving flow diagram is contained in figure 1.

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## FAA/USAF/NAVY JRPG

## PROBLEM SOLVING FLOW



— Direct Coordination  
 - - - - Information Flow

Figure 2

**Key Performance Parameters for Radios**

**Attachment 9**

## SPECIFIC KEYS

### GAG (GRT-22)

- 24 - INCORRECT MODULATION
- 66 - INCORRECT POWER OUTPUT
  - 1 - TRANSMITTER INOPERATIVE
- 12 - SET FOR HIGH LEVEL INSTEAD OF LOW LEVEL AUDIO
  - 1 - FREQUENCY ACCURACY
  - 1 - LPA INOPERATIVE
  - 1 - WIDEBAND MODIFICATION NOT INSTALLED

## SPECIFIC KEYS

### GAG (GRR-24)

- 22 - SIGNAL TO NOISE RATIO OUT OF TOLERANCE
- 23 - SQUELCH OUT OF TOLERANCE
- 6 - AGC OUT OF TOLERANCE
- 8 - IF VOLTAGE OUT OF TOLERANCE
- 1 - FREQUENCY ACCURACY
- 4 - RECEIVE AUDIO OUT OF TOLERANCE
- 8 - FREQUENCY ACCURACY
- 5 - AF VOLTAGE INCORRECT



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### GAG (GRR-24)

- 22 - SIGNAL TO NOISE RATIO OUT OF TOLERANCE
- 23 - SQUELCH OUT OF TOLERANCE
- 6 - AGC OUT OF TOLERANCE
- 8 - IF VOLTAGE OUT OF TOLERANCE
- 1 - FREQUENCY ACCURACY
- 4 - RECEIVE AUDIO OUT OF TOLERANCE
- 8 - FREQUENCY ACCURACY
- 5 - AF VOLTAGE INCORRECT

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FPS-117 Radar Service Performance

Attachment 10

**FACILITY PERFORMANCE FOR BDAT/RDAT FY88 RUN DATE 11/01/88**  
**FPS-117 RADARS**

FAC	LOC IDENT	SCH HOURS	UNSCH HOURS	SCH #	UNSCH #	UPTIME HOURS	UNSCH MIBO	UNSCH MTR	AVAIL	REL	ADJ AVAIL
BDAT	AKN	215.8	107.7	67	49	8460.5	172.66	2.20	96.32	87.02	96.32
BDAT	ODB	155.8	81.9	28	19	8546.3	449.81	4.31	97.29	94.80	97.29
BDAT	CZF	219.3	1932.7	37	15	6632.0	442.13	128.85	75.50	94.72	75.56
BDAT	BHM	401.2	457.8	49	34	7925.0	233.09	13.46	90.22	90.22	90.22
BDAT	FYU	86.2	91.0	28	22	8606.8	391.22	4.14	97.98	94.05	97.98
BDAT	QIZ	116.1	114.7	36	33	8553.2	259.19	3.48	97.37	91.16	97.37
BDAT	TLJ	70.5	518.0	30	18	8195.5	455.31	28.78	93.30	94.87	93.30
BDAT	TNC	137.2	22.0	31	9	8624.8	958.31	2.44	98.19	97.53	98.19
RDAT	AKN	214.4	103.8	67	44	8465.8	192.40	2.36	96.38	88.27	96.38
RDAT	ODB	155.8	81.9	28	19	8546.3	449.81	4.31	97.29	94.80	97.29
RDAT	CZF	225.4	1932.7	38	15	6625.9	441.73	128.85	75.43	94.71	75.49
RDAT	BHM	424.4	457.8	52	34	7901.8	232.41	13.46	89.96	90.19	89.96
RDAT	FYU	87.0	91.0	29	22	8606.0	391.18	4.14	97.97	94.05	97.97
RDAT	QIZ	116.1	114.7	36	33	8553.2	259.19	3.48	97.37	91.16	97.37
RDAT	TLJ	93.3	518.0	31	18	8172.7	454.04	28.78	93.04	94.85	93.04
RDAT	TNC	138.0	22.0	32	9	8624.0	958.22	2.44	98.18	97.53	98.18

**ECM Demonstration Results**

**Attachment 11**

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6430.2 CHG 30  
ATTACHMENT 72

RAAUZYUW RHDIAAA8740 3212151-UUUU--RHDIXMP.  
ZNR UUUUU

R 162105Z NOV 88

FM 1AF LANGLEY AFB VA//DO//

TO RUEDBJA/24AD GRIFFISS AFB NY//DO//

RUCJPGA/SE AD SECTOR TYNDALL AFB FL//DO/DOC/DOO//

INFO RUEAHQA/HQ USAF WASH DC//XOORC/XOORL/XOORI//

RHDIAAA/HQ TAC LANGLEY AFB VA//DOY/DOO/LNF/XPPD//

RUVECLA/HQ NORAD PETERSON AFB CO//NCO/FAA/LA//

RUWMLA/25AD MCCORD AFB WA//DO//

RUEDBJA/NE AD SECTOR GRIFFISS AFB NY//DO/DOC/DOY//

RUWMLA/NW AD SECTOR MCCORD AFB WA//DO/DOC/DOY//

RHFIAAA/SW AD SECTOR MARCH AFB CA//DO/DOC/DOY//

RHCGGIL/FAA SOUTHERN RGN ATLANTA GA//AFREP//

BT

UNCLAS

SUBJ: ECM DEMONSTRATION IN SEADS JACKSONVILLE ARTCC ADR

1. SUBJECT DEMO CONDUCTED ON 20 SEP 1AW AN ECM DEMONSTRATION TEST PLAN. EMITTER USED WAS THE TAC CONTRACTED ECM EQUIPPED LEAR-35, USING ALO 176 AND 188 EQUIPMENT, UNDER CLOSE CONTROL OF THE SE SOCC IN THE W-157, 158, 159 AIRSPACE. SITES IMPACTED WERE: JEDBURG, SC, U03), WHITEHOUSE, FL, U-4), PATRICK, FL, U-5), CROSS CITY, U-10) AND ASHBURN, GA (FAA ONLY SITE).

2. PURPOSE TO DEMONSTRATE ECM EFFECTS ON GROUND BASED RADARS, USING THE LEAR-35, WHILE ESTABLISHING VALID ACCEPTABLE EMISSION PARAMETERS AND DISPROVE ASSUMED ECM IMPACTS, IF ANY, ON THE FAA RADAR NETWORK.

3. OVERALL RESULTS POSITIVE. FOX AND INDIA BAND JAMMING HAD NO EFFECT ON GROUND BASED RADARS. SPECIFIC ECHO BAND (HEIGHT FINDER RADARS) JAMMING WILL NOT AFFECT TERMINAL RADARS IF PRECAUTIONS IN RANGE AND FREQUENCY ARE EMPLOYED. DELTA BAND JAMMING APPEARS TO AFFECT ARSR 3 RADARS GREATER THAN FPS 60 SERIES RADARS. DELTA BAND JAMMING WILL AFFECT SEVERAL RADARS SIMULTANEOUSLY BUT NOT TO THE POINT THE RADAR SITES EXPERIENCE DATA OVERLOADING. ARTCC CONTROLLERS COULD READ BEACON SYMBOLOLOGY THROUGH THE JAMMING NOISE/CLUTTER.

4. SPECIFICS

A. FOX-2 THROUGH FOX-5 (3100-3500 MHZ), ELECTRONIC JAMMING, BARRAGE, HAD NO EFFECT ON LONG OR SHORT RANGE GROUND RADARS. ECM EMITTER WAS WITHIN 80 MILES OF SITES USING THREE 400 WATT TRANSMITTERS. RESULTS EXPECTED SINCE LONG AND SHORT RANGE RADARS OPERATE ON DELTA AND ECHO BAND RESPECTIVELY.

B. INDIA-4 THROUGH INDIA-10 (8600-9950 MHZ), ELECTRONIC JAMMING, BARRAGE, HAD NO EFFECT ON LONG OR SHORT RANGE GROUND RADARS. EMITTER WAS WITHIN 80 MILES OF SITES USING THREE 400 WATT TRANSMITTERS. RESULTS EXPECTED SINCE LONG AND SHORT RANGE RADARS OPERATE IN DELTA AND ECHO BANDS RESPECTIVELY.

C. ECHO BAND (2775 MHZ PLUS MINUS 20 MHZ BW), ELECTRONIC, SPOT, JAMMING DID IMPACT THE JEDBURG CHARLESTON (U-03) HEIGHT FINDER RADAR FROM 160 MILES INWARD USING TWO 400 WATT TRANSMITTERS (800 WATTS) WHILE NOT INTERFERING WITH ORLANDO, FLORIDA'S SHORT RANGE (APPROACH) RADAR WHICH WAS 175 MILES FROM THE EMITTER AND ALSO OPERATING ON 2775 MHZ. RESULTS EXPECTED.

D. DELTA BAND (1200 MHZ PLUS MINUS 50 MHZ), ELECTRONIC, SPOT, JAMMING DID IMPACT ALL LONG RANGE RADARS WITHIN 185 MILES OF THE EMITTER. NO SHORT RANGE RADARS (TERMINAL) WERE AFFECTED. NO LESS THAN THREE SITES AND AT TIMES ALL FIVE SITES WERE EXPERIENCING JAMMING AND PRODUCING STROBES. DATA COUNTS ROSE FROM 25 TO 700 AT CROSS CITY'S AREA 3, 50 TO 169 AT JEDBURG AND 40 TO 90 AT PATRICK. WHITEHOUSE'S DATA COUNTS NOT REPRESENTATIVE DUE TO ITS AUTOMATIC CLUTTER ELIMINATED (ACE) II SETTING DURING THE DEMONSTRATION. THE

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ACE CONDITION WAS REQUIRED DUE TO WEATHER NOT THE JAMMING DEMO.  
THOUGH INCREASED DATA COUNTS TRANSLATE TO INCREASED CLUTTER/NOISE ON  
ARTCC AND SOCC DISPLAY CONSOLES. NO FLIGHT SAFETY WAS EXPERIENCED.  
ARTCC DISPLAYS, THOUGH CLUTTERED, PERMITTED READ-THROUGH OF BOTH  
BEACON AND TRACK SYMBOLOGY. NO LOSS OF BEACON OR FALSE BEACON  
READINGS WERE EXPERIENCED. THERE WAS NO RISE IN BEACON DATA COUNTS  
RECORDED OR REPORTED.  
E. INDIA BAND MECHANICAL JAMMING (CHAFF) HAD NO EFFECT ON LONG OR  
SHORT RANGE RADARS. CHAFF DROPPED IN A SINGLE BURST AND MULTIPLES  
OF TWO. RESULTS WERE EXPECTED SINCE GROUND BASED LONG AND SHORT  
RANGE RADARS OPERATE IN DELTA AND ECHO BANDS RESPECTIVELY.  
F. DELTA BAND MECHANICAL JAMMING (CHAFF) DID IMPACT LONG BUT NOT  
SHORT RANGE RADARS. CHAFF DROPPED AT 20,000 FT AND APPEARED ON  
ARTCC AND SOCC DISPLAYS AS SEARCH TARGETS. RESULTS EXPECTED SINCE  
THE CHAFF WAS SPECIFICALLY CUT TO JAM DELTA BAND RADARS. EFFECTS/  
DURATION OF CHAFF DEPENDENT ON THE DROP ALTITUDE AND WIND  
CONDITIONS.  
5. LESSONS LEARNED:  
A. JAMMING, ELECTRONIC OR MECHANICAL (CHAFF), FOX-2 THROUGH F-5 AND  
INDIA-4 THROUGH INDIA-10 DOES NOT AFFECT/INTERFERE WITH GROUND BASED  
SHORT OR LONG RANGE RADARS. CEASE JAMMING CALLS ON SUCH FREQUENCIES  
SHOULD BE NONEXISTENT.  
B. ECHO BAND JAMMING, ELECTRONIC, DOES NOT AFFECT LONG RANGE RADARS  
BUT COULD AFFECT SHORT RANGE, TERMINAL, RADARS SINCE BOTH HEIGHT  
FINDER AND SHORT RANGE RADARS OPERATE IN ECHO BAND. CEASE JAMMING  
CALLS MAY OCCUR BUT THE KEY IS TO IDENTIFY AREAS, FREQUENCIES AND  
POWER OUTPUTS WHICH CAN SUPPORT BOTH FAA AND TAC/IAF TRAINING  
REQUIREMENTS WHILE MAINTAINING FLIGHT SAFETY.  
C. DELTA BAND, ELECTRONIC AND MECHANICAL (CHAFF), JAMMING WILL  
AFFECT BOTH ARTCC AND SOCC CONTROL DISPLAYS. MORE THAN A SINGLE  
SITE WILL BE AFFECTED AT A TIME AND ARSR 3 RADARS APPEAR MORE  
SENSITIVE TO ELECTRONIC JAMMING (RISE IN SEARCH DATA COUNT) THAN 60  
SERIES RADARS. ARTCC DISPLAYS, THOUGH CLUTTERED DURING JAMMING,  
ALLOWS FOR READ-THROUGH OF BEACON AND AIRCRAFT SYMBOLOGY. APPEARS  
IF FAA CONTROLLERS, SYSTEM ENGINEERS AND SITE PERSONNEL ARE AWARE OF  
THE JAMMING TO BE CONDUCTED, SPECIFIC FREQUENCIES, POWER OUTPUT,  
ALTITUDE AND AREAS, THEN CEASE JAMMING CALLS WILL BE GREATLY REDUCED  
IF NOT ELIMINATED.  
6. TAC CONTRACTED ECM EQUIPPED LEAR-35 AIRCRAFT WILL BE AVAILABLE  
FOR MONTHLY WEEKLY SCHEDULING BY ALL SECTORS THROUGH 1992. THE  
AVAILABILITY OF SUCH AIRCRAFT, WITH KNOWN FLIGHT CHARACTERISTICS,  
ALLOWS EACH SECTOR TO IDENTIFY ACCEPTABLE ECM AREAS. CEASE JAMMING  
CALLS BY THE FAA SHOULD BE GREATLY DECREASED ELIMINATED WHEN USING  
THE LEAR-35 OR OTHER AIRCRAFT USING ALO-176 AND 188 ECM PODS.  
7. FIRST AIR FORCE POC IS CAPT BUCCELLATO, DOWEE, AV 574-6303.  
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JRPG Procedures for M&R and MC (Revised)

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JRPG Procedures for M&R and MC (Revised)

Attachment 12



construction projects at the JSS sites. The Agreement, in addition to procedures for accomplishing funding transfer, will address procedures for project approval from the site level to final approval authority.

(1) AF Site Chief will:

- (a) Identify needed facility improvements/alterations.
- (b) Coordinate with the FAA Field Office Supervisor on the scope of work.
- (c) Ensure work is essential for operations, safety and health of site personnel.
- (d) Obtain initial cost estimate if possible.
- (e) First attempt to obtain the needed work from the appropriate military support base. However if not available, minor construction will be accomplished through development of local reimbursable agreements between the appropriate FAA Region and USAF Air Defense Sector.
- (f) Submit AF Form 332, BCE Work Request, to the USAF Air Defense Sector/DE.
- (g) Complete DD Form 250, Material Inspection and Receiving Report, upon successful completion of requested work and forward it to the USAF Air Defense Sector/DE.
- (h) Forward a copy of the approved AF Form 332, BCE Work Request (or DD Form 1391, Military Construction Project Data, as appropriate) to the support base real property office as/if required.

(2) USAF Air Defense Sector/DE (ADS/DE) will:

- (a) Review site requirements for validity.
- (b) Assist AF Site Chief/FAA Field Office Supervisor where necessary in preparing cost estimates.
- (c) Approve/disapprove projects within AD/CC approval authority. Forward projects exceeding approval authority through 1AF/LGXM/DE to HQ TAC/DE for validation and approval.
- (d) Fund, to include design cost, projects costing less than \$10,000. All MC projects, including design cost, exceeding \$10,000 will be funded by HQ TAC/DE upon request from the ADS/DE via 1AF/LGXM/DE.
- (e) Coordinate with FAA Regional Airway Facilities Division on project design and funding.
- (f) Confirm that completed project meets requirement.
- (g) Authorize payment to FAA Regional Airway Facilities Division.

(3) USAF Air Defense Sector/AC (ADS/AC) pays FAA Regional Airway Facilities Division.

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(4) FAA Regional Airway Facilities Division will:

- (a) Design approved projects.
- (b) Contract for desired work.
- (c) Coordinate with ADS/DE on design, funding, and construction matters.
- (d) Depending on the scope of the work, the FAA Division may request the affected FAA Sector Office to perform these tasks.

(5) HQ TAC/DE will:

- (a) Approve/disapprove projects exceeding AD/CC approval authority.
- (b) Fund projects exceeding \$10,000.

(6) HQ TAC/AC will:

- (a) Transfer funds to ADS OBANs upon TAC/DE approval.

b. Procedures: Mutually agreeable minor construction projects at JSS sites will be accomplished using the following procedures as guidelines for establishment of local FAA Region/USAF Air Defense Sector reimbursable agreements:

(1) AF Site Chief will:

- (a) Identify the construction requirement and ensure it is essential for operations, personnel safety, or is needed to sustain or enhance the effectiveness of the site mission.
- (b) Coordinate with FAA Field Office Supervisor on the requirement and ensure that it does not interfere with FAA operations.
- (c) First attempt to obtain the needed work from the appropriate military support base. However if not available, minor construction will be accomplished through development of local reimbursable agreements between the appropriate FAA Region and USAF Air Defense Sector.
- (d) Submit the requirements to the respective ADS/DE using an AF Form 332 including a complete justification and a single line drawing of the proposed work.

(2) USAF Air Defense Sector/DE will:

- (a) Review the AF Form 332, validate the requirements via site visit, telecon, input from the agencies, etc., and approve those within AD/CC approval authority.
- (b) If the request has not been estimated, prepare the estimate or obtain engineering assistance from the host base if needed.

# 1. PURPOSE:

This document establishes responsibilities and methods for accomplishing real property maintenance and repair (M&R) and minor construction (MC) projects to meet Air Force operational or safety requirements contained within the Joint Surveillance System (JSS) site boundaries.

# 2. SCOPE:

The NAT-614 Agreement between the Department of Transportation and Department of Defense authorizes the furnishing of maintenance services by the Federal Aviation Administration (FAA) to the United States Air Force (USAF) on a reimbursable basis. Headquarters Tactical Air Command (TAC) is the executive agent for the USAF for Joint Radar Planning Group (JRPg) matters and is designated as the paying office for reimbursable services. Services furnished by FAA include Height Finder Radar (HFR) tower building maintenance and common site support. (For responsibilities and reimbursable cost basis see NAT-614). Minor Construction projects at the JSS sites are not covered in the NAT 614. These sites have no USAF engineering capability and their location usually makes obtaining engineering assistance from the nearest Air Force base prohibitive. Therefore, since FAA often has local capability or will be accomplishing similar tasks, it would be most effective to have the FAA act as the design and contracting agent for USAF on a reimbursable basis. Minor construction will be accomplished through development of local reimbursable agreements between the appropriate FAA Region and USAF Air Defense Sector. However, the USAF Site Chief may first attempt to obtain the needed work from a military support base prior to exercising the procedures set forth in this agreement.

# 3. REQUIREMENT:

a. The required maintenance and repair of USAF owned real property at JSS sites is to keep the facilities in a high state of serviceable condition or return the facilities to an existing state without changing the intended use of the facility. For further detail, see AFR 86-1, para 2-3a and b.

b. USAF required minor construction work at JSS sites including new facilities, additions to existing facilities, or modifications which change the use of or significantly upgrade the utility of a building. For further detail, see AFR 86-1, para 2-3c.

# 4. MAINTENANCE AND REPAIR:

A. Responsibilities: Maintenance and repair of USAF real property at JSS sites will be accomplished through FAA channels in accordance with the NAT-614 Agreement. TAC will reimburse the FAA for total costs incurred to accomplish M&R work at JSS sites to include material, engineering, maintenance mechanic time and travel, etc.

## b. Procedures:

### (1) AF Site Chief will:

(a) Coordinate with the FAA Field Office Supervisor on M&R projects on USAF real property.

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(b) Monitor M&R projects and provide assessment of completed work to USAF Air Defense Sector/DE.

(c) Provide final cost data of M&R projects to USAF Air Defense Sector/DE.

(2) USAF Air Defense Sector/DE will:

(a) Maintain fiscal year (FY) cost data for M&R projects approved/completed at JSS sites within the USAF Air Defense Sector area of responsibility.

(b) Notify HQ TAC/XPPF if FY M&R project costs exceed target figures provided by XPPF.

(3) HQ TAC/XPPF will:

(a) Provide FY M&R project cost target figures to USAF Air Defense Sector/DE.

(b) Reimburse FAA for M&R projects accomplished on USAF real property at JSS sites.

(4) FAA Field Office Supervisor will:

(a) Coordinate with AF Site Chief on M&R projects for USAF real property.

(b) Provide emergency M&R support for USAF real property as needed.

(c) Forward routine M&R requests for USAF real property to FAA Sector Manager's Office for concurrence and issuance of Standard Form 44 (if less than \$2,000) or forwarding to FAA Region for issuance of procurement request (if greater than \$2,000).

(5) FAA Region will:

(a) Issue procurement request (as needed) in support of M&R projects at JSS sites.

(b) Forward bills for M&R projects on USAF real property at JSS sites to FAA Washington per normal reimbursable billing procedures.

(6) FAA Washington will:

(a) Forward M&R project bills on USAF real property to HQ TAC/XPPF for reimbursement per normal reimbursable billing procedures.

##### 5. MINOR CONSTRUCTION:

a. Responsibilities: The appropriate FAA Regional Airway Facilities Division and USAF Air Defense Sector will establish a local reimbursable agreement which will effect the means for direct transfer of funding authority from the Air Defense Sector to the FAA Region for mutually agreeable minor

(c) If the estimate exceeds AD/CC approval authority, prepare DD Form 1391. Route DD Form 1391 through 1AF/LGXM/DE for submission to HQ TAC/DE for approval.

(d) If the project is disapproved, return the request to the site and assist the site in satisfying the requirement in other ways.

(e) If the estimate is less than \$10,000, request funds from ADS/AC. If the cost exceeds \$10,000, forward approval document and funds request through 1AF/LGXM/DE to HQ TAC/DE.

(f) If the project is approved, forward the approved document, all pertinent plans, estimates, etc., and an AF Form 185, Project Order to the appropriate FAA Regional Airway Facilities Division. The Project Order will cite the accounting classification as established by HQ TAC/DE.

(g) Upon receipt of the DD Form 250 from the site, initiate payment to the FAA Region through ADS/AC.

(h) Prepare and forward to the support base real property office a completed DD Form 1354, Transfer and Acceptance of Military Real Property.

(3) USAF Air Defense Sector/AC will pay FAA Regional Airway Facilities Division upon approval from ADS/DE.

(4) FAA Regional Airway Facilities Division will:

(a) Review the requested work to ensure that it is compatible with FAA operations and determine that it is within regional capability to design and contract. If a positive determination is made, the FAA region will provide a project cost estimate to the USAF Air Defense Sector/DE. The Airway Facilities Division, will then accept the AF Form 185, return the signed copy to the USAF Air Defense Sector, and begin work.

(b) Coordinate with the ADS/DE during project development and during construction.

(c) Design and contract the requested work for the project.

(5) HQ TAC/DE will fund valid requirements within fiscal constraints.

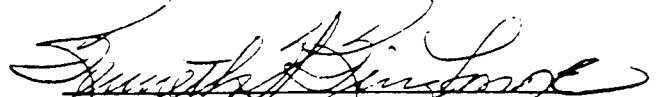
(6) HQ TAC/AC will transfer funds to identify ADS OBANs.

6. AMENDMENT:

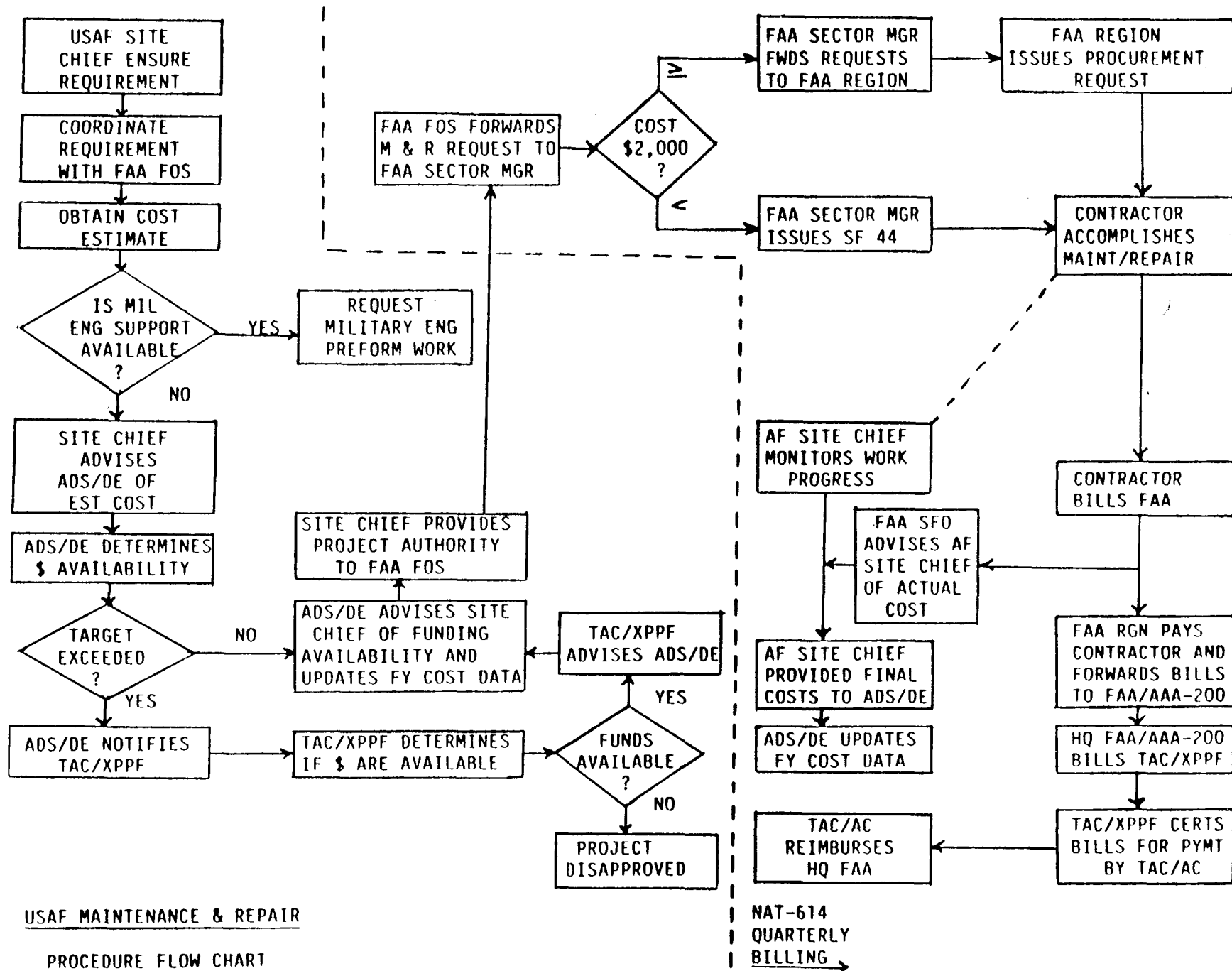
This procedure shall be reviewed annually prior to the formal Joint Radar Planning Group meeting and any written change agreed to by the JRPG Co-Chairmen shall be incorporated as a change to this procedure.

  
(Date)

ROBERT C. KLOSE  
Department of Transportation  
Federal Aviation Administration  
JRPG Co-Chairman

  
(Date)

KENNETH H. KINGSMORE, Lt Col  
Department of the Air Force  
Headquarters Tactical Air Command  
JRPG Co-Chairman



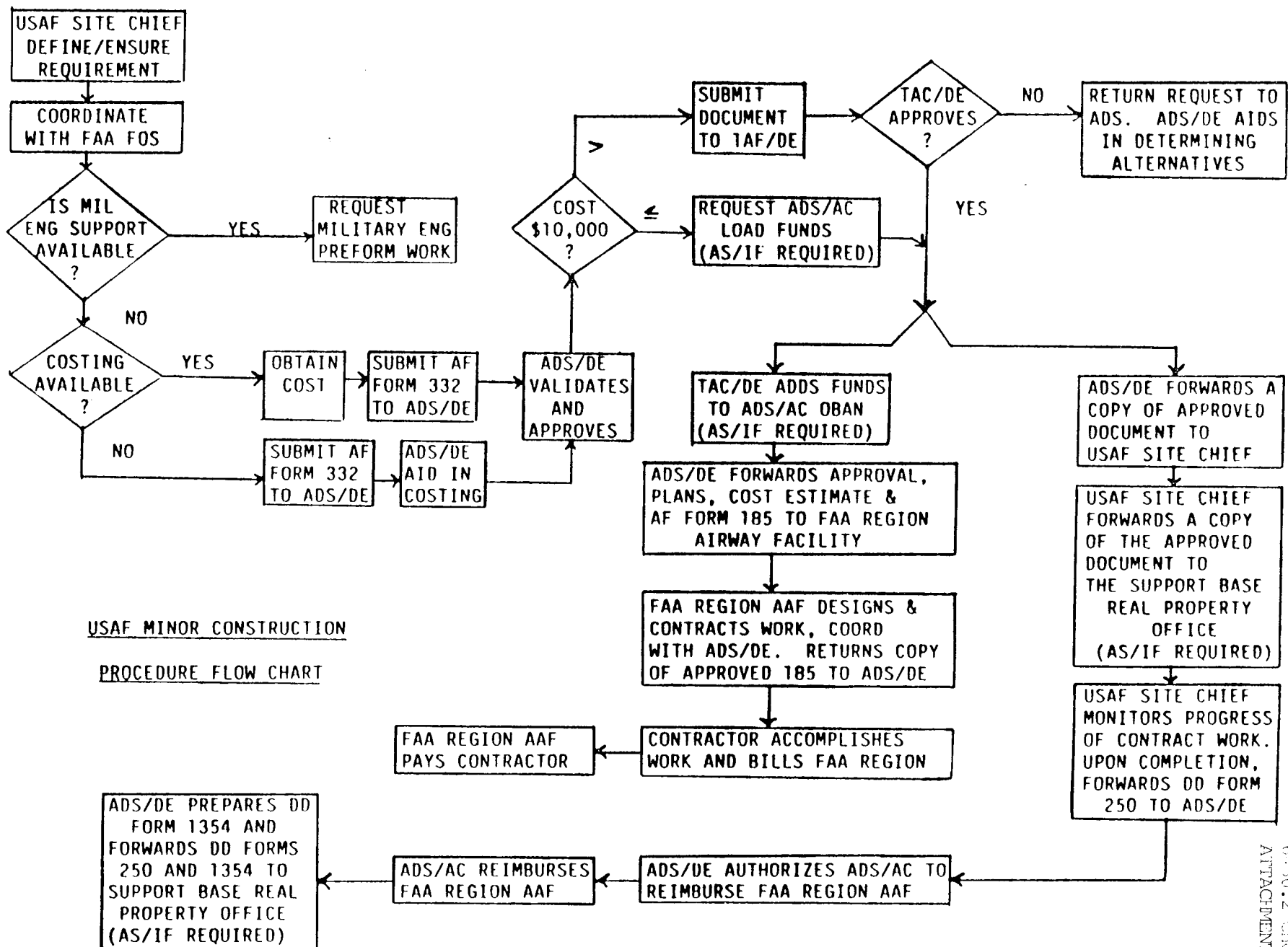
DOCUMENTS REFERENCED

AF Form 185	Project Order
AF Form 332	BCE Work Request
AF Regulation 86-1	Programming Civil Engineer Resources
DD Form 250	Material Inspection and Receiving Report
DD Form 1354	Transfer and Acceptance of Military Real Property
DD Form 1391	Military Construction Project Data
NAT-614	MOA Between DOT and DOD for Joint Surveillance System
Standard Form 44	Purchase Order/Invoice Voucher

DOCUMENTS REFERENCED

AF Form 185	Project Order
AF Form 332	BCE Work Request
AF Regulation 86-1	Programming Civil Engineer Resources
DD Form 250	Material Inspection and Receiving Report
DD Form 1354	Transfer and Acceptance of Military Real Property
DD Form 1391	Military Construction Project Data
NAT-614	MOA Between DOT and DOD for Joint Surveillance System
Standard Form 44	Purchase Order/Invoice Voucher





USAF MINOR CONSTRUCTION

PROCEDURE FLOW CHART

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ABBREVIATIONS

AAA	Accounting (FAA)
AAF	Airway Facility (FAA)
AC	Comptroller (USAF)
AD	Air Division (USAF)
ADS	Air Defense Sector (USAF)
AF	Air Force
AFR	Air Force Regulation
BCE	Base Civil Engineer (USAF)
CC	Commander (USAF)
DD	Department of Defense
DE	Civil Engineers (USAF)
DOD	Department of Defense
DOT	Department of Transportation
FAA	Federal Aviation Administration
FOS	Field Office Supervisor (FAA)
FY	Fiscal Year
HFR	Height Finder Radar
HQ	Headquarters
JRPG	Joint Radar Planning Group
JSS	Joint Surveillance System
MC	Minor Construction
MOA	Memorandum of Agreement
M&R	Maintenance and Repair
OBAN	Operating Budget Account Number (USAF)
SF	Standard Form
TAC	Tactical Air Command
USAF	United States Air Force
XPPF	Electronic Programs Division (TAC/USAF)

## Joint Use Site Configurations

## Radar Sites with HFR, Mode 4 and Radios

Jedburg	Oceana (May 89)	Mt Kaala (2-HFR)
Cross City	Key West	Riverhead/Suffolk
Houston/Ellington	Tyndall/Panama City	Fort Lonesome
Paso Robles/Black Mtn	Mount Laguna	San Pedro
Salem	Mill Valley	Crescent City/Klamath

## Radar Sites with Mode 4 and Radios

Oilton	Guam, Santa Rosa	Murphy Dome
Ft Fisher	North Truro	Whitehouse
Makah	Patrick	Richmond/Miami
Bucks Harbor	Slidell	

## Radar Sites with Radios

Andrews/Odessa	El Paso	Silver City
Lakeside/Kalispell	Keno/Klamath Falls	Mica Peak/Spokane
Finley	Malmstrom/Great Falls	Watford City
Remsen/Utica	Nashwauk	Empire

## Data Tie Sites

The Plains/Wash DC	12 USAF Alaska Sites	Mt Kokee
Citronelle/Grand Bay	Dansville	Sonora
Canton/Detroit	Kenai	Phoenix/Humboldt Mtn

**MIM Modification Status**

Attachment 14

## MIM MODIFICATIONS

<u>Modification</u>	<u>Project No</u>	<u>Status</u>
Mt. Kaala MIM Range Extension	310-86M059A	Modification installed at facility 5/88 with final instruction book changes to be issued 1/89.
Mode 4 MDS	310-86D116A	Estimate field distribution 9/89.
MIM w/o Height	310-88M030A	Estimate study completion 9/89.

Note: All other projects previously listed on 6430.2 CHG 29 dated 3/9/88  
have been either issued or identified as not being required and have  
been deleted from this list.

